

GENERAL CATALOG



THE COLLEGE OF
WILLIAM AND MARY
IN VIRGINIA

1970-1971

Note: This catalog provides a record for the 1970-71 academic year and announcements for the 1971-72 year. It is current until April, 1972.

THE COVER: On the cover is The Coat of Arms granted to the College by the College of Heralds, May 14, 1694.

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THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA



BULLETIN—THE GENERAL CATALOG

TWO HUNDRED AND SEVENTY-EIGHTH YEAR
1970-1971

Announcements, Session 1971-1972

WILLIAMSBURG, VIRGINIA

CORRESPONDENCE DIRECTORY

To facilitate prompt attention, inquiries should be directed to the following:

ADMISSIONS

Robert P. Hunt, *Dean of Admissions*

ANNUITIES AND GIFTS

Davis Y. Paschall, *President*

BUSINESS MATTERS, FEES AND EXPENSES

Robert T. English, Jr., *Vice President for Business Affairs*

DEVELOPMENT AND ALUMNI AFFAIRS

James S. Kelly, *Director of Development; Executive Secretary of Alumni Society*

Gordon C. Vliet, *Director of Alumni Affairs*

EMPLOYMENT OF STUDENTS, STUDENT LOANS, SCHOLARSHIPS, VETERAN'S AFFAIRS

John C. Bright, *Director of Student Aid*

GRADUATE STUDIES

Harlan E. Schone, *Acting Graduate Dean of Arts and Sciences*

Anthony L. Sancetta, *Associate Dean for Graduate Studies, School of Business Administration*

Richard B. Brooks, *Dean of School of Education*

James P. Whyte, Jr., *Dean Marshall-Wythe School of Law*

William J. Hargis, Jr., *Dean of School of Marine Science*

Chairman of Department concerned

LIBRARY

William C. Pollard, *Librarian*

PUBLIC INFORMATION SERVICES

Ross L. Weeks, Jr., *Director*

RECORDS AND TRANSCRIPTS

Dudley M. Jensen, *Registrar*

EVENING COLLEGE, EXTENSION DIVISION, AND SUMMER SESSION

Donald J. Herrmann, *Dean of the School of Continuing Studies*



The Sir Christopher Wren Building

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COLLEGE CALENDAR

1971-72

1971

FIRST SEMESTER

<i>September 4-7</i>	Orientation Period (Saturday-Tuesday)
<i>September 8</i>	Freshman Registration (Wednesday)
<i>September 8-9</i>	Registration of all Other Students, including Graduate Students (Wednesday-Thursday)
<i>September 10</i>	Beginning of Classes: 8 a.m. (Friday)
<i>September 18</i>	Last Day for Course or Section Changes: 12:00 noon (Saturday)
<i>October 23</i>	Homecoming (Saturday)
<i>October 29</i>	Mid-Semester Reports (100-200 Courses) filed with Registrar: 9 a.m. (Friday)
<i>November 24</i>	Beginning of Thanksgiving Holiday: 1 p.m. (Wednesday)
<i>November 29</i>	End of Thanksgiving Holiday: 8 a.m. (Monday)
<i>December 17</i>	End of Classes: 5 p.m. (Friday)
<i>December 17</i>	Beginning of Christmas Recess: 5 p.m. (Friday)

1972

<i>January 4</i>	End of Christmas Recess: 8 a.m. (Tuesday)
<i>January 4-6</i>	Reading Period (Tuesday-Thursday)
<i>January 7-19</i>	Semester Examinations (Friday-Wednesday)

SECOND SEMESTER

<i>January 27-28</i>	Registration of All Students (Thursday-Friday)
<i>January 31</i>	Beginning of Classes: 8 a.m. (Monday)
<i>February 5</i>	Charter Day: 11 a.m. (Saturday)
<i>February 7</i>	Last Day for Course or Section Changes: 5 p.m. (Monday)
<i>March 18</i>	Mid-Semester Reports (100-200 Courses) filed with Registrar (Saturday) 12:00 noon
<i>March 25</i>	Beginning of Spring Recess: 1 p.m. (Saturday)
<i>April 4</i>	End of Spring Recess: 8 a.m. (Tuesday)
<i>April 21</i>	Spring Convocation: 11 a.m. (Friday)
<i>May 13</i>	End of Classes: 5 p.m. (Saturday)
<i>May 14-17</i>	Reading Period (Sunday-Wednesday)
<i>May 18-30</i>	Semester Examinations (Thursday-Tuesday)
<i>June 4</i>	Commencement Day (Sunday)

SUMMER SESSION 1972

June 19

Beginning of Summer Session—First Term (Monday)

July 21

End of First Term (Friday)

July 24

Beginning of Second Term (Monday)

August 25

End of Second Term (Friday)

August 26

Summer Session Commencement (Saturday)

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General Statement of Policy

Within the limits of its facilities as to numbers that can be accommodated, admission to the College of William and Mary is open to all qualified students without regard to race, creed, color or national origin; the facilities and services of the College are open to all enrolled students on the same basis, and all standards and policies of the institution, including those governing employment, are applied accordingly.

I. THE COLLEGE

HISTORY

WHEN it was chartered in 1693 by the joint sovereigns whose name it bears, the College of William and Mary represented the fulfillment of a dream cherished by the Virginia colonists and the authorities in England since 1618, eleven years after the founding of Jamestown in 1607. According to its royal charter the College was established to "the end that the Church of Virginia may be furnished with a seminary of ministers of the gospel, and that the youth may be piously educated in good letters and manners, and that the Christian faith may be propagated amongst the Western Indians to the glory of Almighty God." The College was to be "a certain place of universal study, or perpetual College of Divinity, Philosophy, Languages, and other good Arts and Sciences, consisting of one President, six Masters or Professors, and an hundred scholars, more or less." The Bishop of London was named the first chancellor, and the College's first president was the Reverend James Blair, who served for fifty years.

The College's first building was constructed in 1695 from plans believed to have been supplied by Sir Christopher Wren. For many years this building, known since its restoration to its original appearance in 1928 as the The Wren Building, provided living quarters and classroom facilities for the entire college.

During the greater part of the eighteenth century the College enjoyed royal patronage and the support of the General Assembly of Virginia, which granted it income from certain import and export duties. Until the American Revolution, it was, perhaps, the wealthiest college in America. It was not until 1729, however, that all six of the professorships provided for in the charter were established. These were Divinity, Philosophy, Oriental Languages, Mathematics, the Grammar School, and the Indian School, a training school for Indians in Virginia, endowed from the income of the estate of Sir Robert Boyle, the eminent English physicist. In 1776, Phi Beta Kappa, the first Greek letter fraternity in an American college, was founded by a group of students in the College, and in 1779 the first Honor System was instituted. An event of major importance that also occurred in 1779 was a drastic revision of the curriculum under the influence of Thomas Jefferson, who was then Governor of Virginia and a member of the College's Board of Visitors. The Grammar School and the two professorships of Divinity and Oriental Languages were discontinued. The professorships of Philosophy and Mathematics were enlarged to include

Fine Arts and Natural Philosophy. And new professorships were established in Law and Police, and Modern Languages, the first chairs in these disciplines to be established in America. At this same time the elective system of studies was introduced.

The College took an active part in the events accompanying the Revolution and the founding of the Republic. Graduates of the College who participated in these events include Thomas Jefferson, James Monroe, Peyton Randolph, John Marshall, and Benjamin Harrison. During the Yorktown campaign in 1781, the college buildings were occupied, in turn, by the Army of Cornwallis and our French allies.

In the first half of the nineteenth century the College prospered, and during the 1836-46 period it attained the highest enrollment in its history until 1889. The College closed during the Civil War and its buildings were occupied successively by both the Confederate and Union armies. In 1862 the Wren Building was burned by Union troops. This was the third destruction of this building by fire, the other burnings having occurred in 1705 and 1859. After the war the College stayed open with difficulties because of its lack of resources. In 1881 it was forced to close, but the charter was kept alive by Col. Ewell, who rang the college bell to mark the opening of every term.

The College was able to reopen just seven years later in 1888 when the Commonwealth of Virginia provided it with an annual grant of \$10,000. In 1906 the Commonwealth purchased the College and placed it under the control of a Board of Visitors appointed by the Governor, the form of government under which the College still operates. In 1918 the College became coeducational. Its facilities were increased tenfold and its student body grew from 130 to 1300 in the sixteen year period that followed. During this period the College established extension centers or Divisions in Richmond (1925) and Norfolk (1930), which are now the Academic Center of Virginia Commonwealth University and Old Dominion University, independent state institutions.

The three original buildings of the College, The Wren Building (1695), The Brafferton (1732), and The President's House (1732), were restored to their original appearance between 1928 and 1932 through the generosity of John D. Rockefeller, Jr.

During World War II the College provided facilities for two armed forces programs: The Army Specialized Training Program and a School for Naval Chaplains. In 1943, the Institute of Early American History and Culture was formed by the union of the historical resources of the College and Colonial Williamsburg, Inc. After the war the College enjoyed an expanded enrollment, which rose to over 2,000 students in 1946 for the first time in its history.

The College, its two divisions, Richmond Professional Institute and the Norfolk Division of the College of William and Mary, and its two branch colleges, Christopher Newport and Richard Bland, were consolidated in 1960 into The Colleges of William and Mary under the direction of a chancellor. However the consolidation was dissolved in 1962, when the two senior colleges in Richmond and Norfolk were declared independent state institutions with separate boards of visitors.

When the College was restored to the independent position that it enjoyed prior to the consolidation it was encouraged by the Commonwealth of Virginia to strengthen its program in the liberal arts and sciences, and develop the advanced professional and graduate programs appropriate to its tradition and competence. In 1967 the College was recognized by the Commonwealth as having attained university status in the modern sense, but the Board of Visitors stipulated that it should always retain its original name.

During the last decade in particular the College has increased its facilities and strengthened its academic program so that it is, in effect, a small university. It is made up of a Faculty of Arts and Sciences with twenty-four departments, and of schools of business administration, education, law, marine science, and continuing studies. It offers concentrations in twenty-five areas for the bachelors degree, seventeen areas for the masters degree, and four areas for the doctorate. The central building on its new campus is the Earl Gregg Swem Library, built in 1966 at a cost of three and a quarter million dollars to house a collection of a million volumes.

In spite of its recent growth, William and Mary has maintained a number of the features that it has long shared with liberal arts colleges of moderate size. A large number of its classes are still small and its ratio of faculty to students (approximately one to fifteen) at the undergraduate level is good. Its students are given ample opportunity for individual oral and written expression and may participate in a general honors program or in one of several departmental honors programs. Practically all of its classes are taught by full time, experienced members of a competent, cosmopolitan faculty. It continues to foster a personal relationship between students, faculty, and administration.

The College has the same name that it was given by royal charter in 1693, but its enrollment and facilities have increased forty-fold. In addition it has fathered four other state colleges and universities that have increased the opportunity for higher education in eastern Virginia many fold. At the same time it has maintained a standard of quality in education that has earned it an enviable reputation in the nation as well as in Virginia. It is still, as it has been for over two-hundred and

seventy odd years, a place of universal study dedicated to promoting the studies of true philosophy, languages, and other good arts and sciences.

Presidents of The College

James Blair, 1693-1743

Thomas Roderick Derw, 1836-1846

William Dawson, 1743-1752

Robert Saunders, 1847-1848

William Stith, 1752-1755

Benjamin S. Ewell, 1848-1849

Thomas Dawson, 1755-1760

John Johns, 1849-1854

William Yates, 1761-1764

Benjamin S. Ewell, 1854-1888

James Horrocks, 1764-1771

Lyon G. Tyler, 1888-1919

John Camm, 1771-1777

Julian A. C. Chandler, 1919-1934

James Madison, 1777-1812

John Stewart Bryan, 1934-1942

John Bracken, 1812-1814

John Edwin Pomfret, 1942-1951

John Augustine Smith, 1814-1826

Alvin Duke Chandler, 1951-1960

William H. Wilmer, 1826-1827

Davis Young Paschall, 1960-

Adam Empie, 1827-1836

Chancellors of The College

Henry Compton, Bishop of London, 1693-1700

Thomas Tenison, Archbishop of Canterbury, 1700-1707

Henry Compton, Bishop of London, 1707-1713

John Robinson, Bishop of London, 1714-1721

William Wake, Archbishop of Canterbury, 1721-1729

Edmund Gibson, Bishop of London, 1729-1736

William Wake, Archbishop of Canterbury, 1736-1737

Edmund Gibson, Bishop of London, 1737-1748

Thomas Sherlock, Bishop of London, 1749-1761

Thomas Hayter, Bishop of London, 1762

Charles Wyndham, Earl of Egremont, 1762-1763

Philip Yorke, Earl of Hardwicke, 1764

Richard Terrick, Bishop of London, 1764-1776

*George Washington, First President of the United States,
1788-1799*

John Tyler, Tenth President of the United States, 1859-1862

Hugh Blair Grigsby, Historian, 1871-1881

*John Stewart Bryan, Twentieth President of the
College of William and Mary, 1942-1944*

Colgate W. Darden, Jr., Governor of Virginia, 1946-1947

*Alvin Duke Chandler, Twenty-second President of the
College of William and Mary, 1962-*

OFFICERS OF THE COLLEGE

Board of Visitors

ERNEST GOODRICH

R. HARVEY CHAPPELL, JR.

FRANK W. COX

Rector

Vice Rector

Secretary

TERM EXPIRES MARCH 6, 1972

WILLITS H. BOWDITCH

R. HARVEY CHAPPELL, JR.

FRANK W. COX

ERNEST GOODRICH

*WILLIAM HUBARD

JOHN C. SWANSON

HARRY D. WILKINS

Newport News, Virginia

Richmond, Virginia

Virginia Beach, Virginia

Surry, Virginia

Roanoke, Virginia

Danville, Virginia

Eastville, Virginia

TERM EXPIRES MARCH 6, 1974

GARRETT DALTON

FREDERICK DEANE, JR.

MRS. ROBERT V. H. DUNCAN

MRS. GEORGE FALCK

RUSSELL B. GILL

ROGER HULL

JOHN R. L. JOHNSON, JR.

BLAKE T. NEWTON, JR.

GEORGE D. SANDS

HARRY L. SNYDER

Radford, Virginia

Richmond, Virginia

Alexandria, Virginia

McLean, Virginia

Petersburg, Virginia

New York, New York

Chadds Ford, Pennsylvania

New York, New York

Williamsburg, Virginia

Virginia Beach, Virginia

Standing Committees of the Board of Visitors

EXECUTIVE COMMITTEE: MR. ERNEST GOODRICH, *Chairman*; MR. WILLITS H. BOWDITCH; MR. FRANK W. COX; MR. R. HARVEY CHAPPELL, JR.; MR. HARRY D. WILKINS; DR. GEORGE SANDS; *Executive Vice President*, ex officio.

FINANCE COMMITTEE: MR. WILLITS H. BOWDITCH, *Chairman*; MR. FREDERICK DEANE, JR., *Vice Chairman*; MR. WILLIAM HUBARD; MR. BLAKE NEWTON, JR.; MR. HARRY L. SNYDER; DR. GARRETT DALTON; *Vice President for Business Affairs*, ex officio.

*Appointed to fill unexpired term of Governor Thomas B. Stanley, deceased.

BUILDINGS AND GROUNDS COMMITTEE: MR. FRANK W. COX, *Chairman*; MRS. GEORGE FALCK; MR. RUSSELL GILL; MR. HARRY L. SNYDER; MR. JOHN SWANSON; *Vice President for Business Affairs*, ex officio.

ACADEMIC AFFAIRS COMMITTEE: DR. GEORGE SANDS, *Chairman*; MR. RUSSELL GILL, *Vice Chairman*; MRS. R. V. H. DUNCAN; MRS. GEORGE FALCK; MR. BLAKE NEWTON, JR.; MR. HARRY WILKINS; MR. WILLITS BOWDITCH; *Vice President for Academic Affairs*, ex officio.

HONORARY DEGREE COMMITTEE: MR. BLAKE NEWTON, JR., *Chairman*; MR. ERNEST GOODRICH, *Vice Chairman*; MR. HARRY D. WILKINS; MR. JOHN SWANSON; MR. HARVEY CHAPPELL, JR.; *Vice President for Academic Affairs*, ex officio.

DEVELOPMENT COMMITTEE: MR. J. R. L. JOHNSON, JR., *Chairman*; DR. GARRETT DALTON, *Vice Chairman*; MR. WILLIAM HUBARD; MR. FREDERICK DEANE, JR.; MR. HARRY L. SNYDER; MR. ROGER HULL; *Director of Development*, ex officio.

STUDENT AFFAIRS COMMITTEE: MR. R. HARVEY CHAPPELL, JR., *Chairman*; MRS. R. V. H. DUNCAN, *Vice Chairman*; MR. J. R. L. JOHNSON, JR.; MR. ROGER HULL; MRS. GEORGE FALCK; MR. HARRY WILKINS; MR. WILLITS BOWDITCH; *Vice President for Student Affairs*, ex officio.

Administration

DAVIS Y. PASCHALL	<i>President</i>
S. DEAN OLSON	<i>Administrative Assistant</i>
JANE H. LATHAM	<i>Recording Secretary,</i> <i>Board of Visitors</i>
DIANA C. LOVE	<i>Secretary</i>
CARTER O. LOWANCE	<i>Executive Vice President</i>
W. MELVILLE JONES	<i>Vice President for Academic Affairs</i>
JOHN H. WILLIS, JR.	<i>Assistant Vice President for Academic Affairs</i>
WARREN HEEMANN	<i>Assistant Vice President for</i> <i>Sponsored Programs and Director of VARC</i>
NELL R. JONES	<i>Administrative Assistant</i>

ROBERT T. SIEGEL	<i>Director, Space Radiation Effects Laboratory</i>
HARLAN E. SCHONE	<i>Acting Graduate Dean of Arts and Sciences</i>
WILLIAM C. POLLARD	<i>Librarian</i>
RAYMOND W. SOUTHWORTH	<i>Director of the Computer Center</i>

JAY LEE CHAMBERS	<i>Director of the Psychological Counseling Center</i>
DUDLEY M. JENSEN	<i>Registrar</i>
ELIZABETH R. STEARNS	<i>Assistant Registrar</i>
KATHERINE K. FUREY	<i>Assistant Registrar</i>
JOHN C. BRIGHT	<i>Director, Student Aid and Placement</i>
STANLEY E. BROWN	<i>Assistant Director, Student Aid and Placement</i>

Faculty of Arts and Sciences

HAROLD L. FOWLER	<i>Dean</i>
ROBERT A. JOHNSTON	<i>Associate Dean</i>

Marshall-Wythe School of Law

JAMES P. WHYTE, JR.	<i>Dean</i>
JOHN E. DONALDSON	<i>Associate Dean</i>
ANNA B. JOHNSON	<i>Law Librarian</i>

School of Business Administration

CHARLES L. QUITTMAYER	<i>Dean</i>
ALGEN B. KING	<i>Associate Dean for Undergraduate Studies</i>
ANTHONY L. SANCETTA	<i>Associate Dean for Graduate Studies</i>

School of Education

RICHARD B. BROOKS	<i>Dean</i>
ROBERT C. JONES	<i>Associate Dean</i>

School of Marine Science

WILLIAM J. HARGIS, JR.	<i>Dean</i>
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School of Continuing Studies

DONALD J. HERRMANN	<i>Dean</i>
E. LEON LOONEY	<i>Associate Dean and Director of Evening College and Extension</i>
PAUL N. CLEM	<i>Director of Summer Session</i>

Business Affairs and Plant Management

ROBERT T. ENGLISH, JR.	<i>Vice President for Business Affairs</i>
FLOYD E. WHITAKER	<i>Treasurer-Auditor</i>
DENNIS K. COGLE	<i>Assistant to Vice President for Business Affairs</i>
IRVING H. ROBITSHEK	<i>Personnel Supervisor and Equal Employment Opportunities Officer</i>
RAYMOND A. ADAMS	<i>Assistant Treasurer-Auditor</i>
WILLARD C. STERLING, JR.	<i>Internal Auditor</i>
H. WEBB HOPPER	<i>Grants Fiscal Administrator</i>
MRS. EVELYN P. KIDD	<i>Supervisor of Student Accounts</i>
MRS. GLADYS CAMPBELL	<i>Supervisor of Student Loan Accounts</i>
ERVIN D. FARMER	<i>Superintendent of Buildings and Grounds</i>
CHARLES E. CHANDLER	<i>Director of Purchase and Stores</i>

Admissions

ROBERT P. HUNT	<i>Dean of Admissions</i>
LILLIAN POE	<i>Assistant to the Dean</i>
REX TILLOTSON	<i>Director of Admissions for Men</i>
HARRIET E. REID	<i>Director of Admissions for Women</i>

Student Affairs

J. WILFRED LAMBERT	<i>Vice President for Student Affairs</i>
CARSON H. BARNES, JR.	<i>Dean of Students</i>
WILLIAM S. SADLER	<i>Acting Dean of Men</i>
WALLACE A. ELLIOTT	<i>Assistant Dean of Students</i>
JOEL C. MCGURK	<i>Assistant Dean of Men for Housing</i>
BIRDENA E. DONALDSON	<i>Dean of Women</i>
CAROLYN L. MOSELEY	<i>Assistant Dean of Women</i>
ROBERT E. DEBORD, M.D.	<i>College Physician</i>
JOSEPH D. BROWN, III, M.D.	<i>College Physician</i>
WARREN J. GREEN	<i>Director of the Campus Center</i>
KENNETH E. SMITH, JR.	<i>Assistant Director of the Campus Center</i>

Alumni and Development

JAMES S. KELLY	<i>Director of Development and Executive Secretary, Society of the Alumni</i>
GORDON C. VLIET	<i>Director of Alumni Affairs</i>

ROSS L. WEEKS, JR. *Assistant to the Executive Vice President and
Director of Office of Information Services*

BARBARA BALL *Information Officer*

JAMES N. CHALKLEY *Supervisor, Printing Office*

H. LESTER HOOKER, JR.	<i>Director of Athletics and Director of Physical Education-Convocation Center</i>
EDMUND T. DERRINGE	<i>Business Manager and Assistant Director of Physical Education-Convocation Center</i>
BARRY FRATKIN	<i>Publicity Director</i>

Established for the purpose of coordinating matters of administrative policy for the College as a whole, its membership includes: Executive Vice President, *Chairman*; Vice President for Academic Affairs; Vice President for Business Affairs; Vice President for Student Affairs; Assistant Vice Presidents; Dean of the Faculty of Arts and Sciences; Dean of the School of Business Administration; Dean of the School of Continuing Studies; Dean of the School of Education; Dean of the School of Marine Science; Dean of the Marshall-Wythe School of Law; Graduate Dean of Arts and Sciences; Director of Development. President of the College, *ex officio*.

INSTRUCTIONAL STAFF¹

DAVIS Y. PASCHALL (1960, 1960), *President of the College*. A.B., M.A., College of William and Mary; Ed.D., University of Virginia.

Emeriti

THOMAS CONNER ATKESON (1954, 1954), *Chancellor Professor of Taxation, Emeritus*. B.S., M.S. and Ph.D., Georgetown University.

MARTHA ELIZABETH BARKSDALE (1936, 1921), *Associate Professor of Physical Education for Women, Emeritus*. O.D., Gymnastic Peoples College, Ollerup, Denmark; A.B. and M.A., College of William and Mary.

EMILY ELEANOR CALKINS (1953, 1927), *Associate Professor of Mathematics, Emeritus*. A.B., College of William and Mary; M.A., University of Michigan.

LESTER J. CAPPON (1946, 1946), *Lecturer in History, Emeritus*. A.B. and M.A., University of Wisconsin; M.A. and Ph.D., Harvard University.

JAMES DAVID CARTER, JR. (1930, 1927), *Associate Professor of Modern Languages, Emeritus*. A.B., College of William and Mary; Docteur de l'Universite de Toulouse.

JOSEPH M. CORMACK (1946, 1946), *Professor of Law, Emeritus*. A.B., Northwestern University; LL.B. and J.S.D., Yale University.

WAYNE FULTON GIBBS (1931, 1926), *Professor of Accountancy, Emeritus*. B.S. and M.S., University of Illinois; C.P.A.

ANDREW C. HAIGH (1958, 1944), *Professor of Music, Emeritus*. A.B., University of Michigan; M.A. and Ph.D., Harvard University.

ALTHEA HUNT (1955, 1926), *Professor of Fine Arts, Emeritus*. A.B., Allegheny College; M.A., Radcliffe College; Litt.D., Allegheny College.

LAWRENCE C. LEONARD (1957, 1955), *Lecturer in Mathematics, Emeritus*. B.S., U.S. Military Academy.

¹The first date indicates the year when the present rank was attained; the second date the year when the individual was first appointed to the instructional staff. A third date indicates the year of reappointment. All changes in the Faculty that occurred in the session 1970-71 are included in this list.

- JEAN STEWART MAJOR (1928, 1928), *Associate Professor of Home Economics, Emeritus*. B.S. and M.A., Columbia University.
- BEN CLYDE McCARY (1968, 1930), *Professor of Modern Languages, Emeritus*. A.B., University of Richmond; Docteur de l'Université de Toulouse.
- RICHARD LEE MORTON (1921, 1919), *Chancellor Professor of History, Emeritus*. A.B., Hampden-Sydney College; M.A., University of Virginia and Harvard University; Ph.D., University of Virginia; Litt.D., Hampden-Sydney College; LL.D., College of William and Mary.
- MARCEL REBOUSSIN (1962, 1946), *Professor of Modern Languages, Emeritus*. Professorat de français, Ecole Normale Supérieure de St. Cloud; M.A., Columbia University; Agrégé des lettres, Sorbonne, Paris.
- MARION DALE REEDER (1967, 1943), *Professor of Physical Education for Women, Emeritus*. B.S. and M.S., University of Illinois.
- GORDON B. RINGGOLD (1963, 1946), *Professor of Modern Languages, Emeritus*. A.B., Denison University; M.A., Middlebury College; Ph.D., Georgetown University.
- GEORGE JEREMIAH RYAN (1945, 1935), *Professor of Classical Studies, Emeritus*. A.B. and M.A., St. Louis University; Ph.D., University of Michigan.
- GRACE M. SMITH (1966, 1966), *Associate Professor of Education, Emeritus*. A.B. and M.Ed., University of Virginia.
- SHIRLEY DONALD SOUTHWORTH (1928, 1927), *Professor of Economics, Emeritus*. A.B., M.A. and Ph.D., Princeton University.
- ALBION GUILFORD TAYLOR (1928, 1927), *Chancellor Professor of Political Economy, Emeritus*. A.B., Des Moines University; M.A., University of Nebraska; Ph.D., University of Illinois.
- ANTHONY PELZER WAGENER (1929, 1929), *Chancellor Professor of Classical Studies, Emeritus*. A.B., College of Charleston; Ph.D., The Johns Hopkins University.
- ALMA L. WILKIN (1957, 1928), *Associate Professor of Home Economics, Emeritus*. B.S., Kansas State University; M.A., Teachers College, Columbia University.

MARGARET WINDER (1959, 1948, 1959), *Assistant Professor of Education, Emeritus*. B.S., Madison College; M.A., College of William and Mary.

Faculty

HENRY ACETO, JR. (1970, 1970), *Associate Professor of Biology*. B.S., State University of New York, Albany; M.S., University of California, Berkeley; Ph.D., University of Texas.

JOSEPH S. AGEE (1969, 1958), *Associate Professor of Physical Education for Men*. B.S. and M.Ed., College of William and Mary.

NATHAN ALTSHULER (1967, 1960), *Professor of Anthropology*. A.B., University of Michigan; Ph.D., Harvard University.

CARL M. ANDERSEN (1967, 1967), *Assistant Professor of Physics*. B.S. and M.S., University of Michigan; Ph.D., University of Pennsylvania.

CHARLES HARPER ANDERSON (1957, 1946), *Lecturer in Law*. A.B. and B.C.L., College of William and Mary; LL.M., University of Virginia.

JAY D. ANDREWS (1959, 1946), *Professor of Marine Science*. B.S., Kansas State College; M.S. and Ph.D., University of Wisconsin.

JEAN C. ANDREWS (1965, 1965), *Instructor in English*. A.B., Pembroke College; M.A., Columbia University.

M. JOY ARCHER (1968, 1968), *Assistant Professor of Physical Education for Women*. B.S., Skidmore College.

ALFRED R. ARMSTRONG (1961, 1933), *Professor of Chemistry*. B.S., and M.A., College of William and Mary; Ph.D., University of Virginia.

HOWARD H. ASHBURY (1960, 1960), *Lecturer in Psychology*. B.S. and M.D., University of Virginia.

ELISABETH E. BACKHAUS (1967, 1966), *Assistant Professor of Modern Languages*. A.B., M.A. and Ph.D., University of Connecticut.

GARY L. BAHR (1970, 1970), *Assistant Professor of Law*. B.S., University of South Dakota School of Business; J.D., University of South Dakota School of Law; LL.M., New York University School of Law.

- ROBERT SYDNOR BAILEY (1951, 1951), *Assistant Professor of Marine Science*. B.S., Randolph-Macon College; M.A., College of William and Mary.
- ROBERT L. BAKER, JR. (1970, 1970), *Assistant Professor of Mathematics*. B.S., Rensselaer Polytechnic Institute; Ph.D., Brown University.
- SAMUEL H. BAKER, III (1969, 1969), *Assistant Professor of Economics*. B.S., Hampden-Sydney College; Ph.D., University of Virginia.
- JOHN T. BALDWIN, JR. (1946, 1937, 1946), *Professor of Biology*. A.B., College of William and Mary; Ph.D., University of Virginia.
- DONALD L. BALL (1969, 1960), *Associate Professor of English*. A.B., University of Richmond; M.A., University of Delaware; Ph.D., University of North Carolina, Chapel Hill.
- CAROL E. BALLINGALL (1970, 1965), *Associate Professor of Anthropology*. A.B., Wayne State University; M.A., University of Chicago.
- WILLIAM J. BANGS, II (1971, 1971), *Assistant Professor of Mathematics*. B.A., M.S., and Ph.M., Yale University.¹
- J. WORTH BANNER (1965, 1949, 1964), *Professor of Modern Languages*. B.S., Roanoke College; M.A. and Ph.D., University of North Carolina.
- NORMAN F. BARKA (1970, 1965), *Associate Professor of Anthropology*. A.B., Beloit College; M.A. and Ph.D., Harvard University.
- ROBERT A. BARRY (1966, 1964), *Assistant Professor of Economics*. A.B., Stanford University; Ph.D., Yale University.
- JOANNE M. BASSO (1967, 1967), *Instructor in Modern Languages*. A.B., Connecticut College for Women; M.A., Middlebury College.
- ELLEN ROSEN BAUER (1967, 1967), *Assistant Professor of Psychology*. A.B., Carleton College; M.A. and Ph.D., University of Illinois.²
- F. SAMUEL BAUER (1969, 1969), *Acting Assistant Professor of Psychology*. A.B., and M.A., University of Illinois.
- N. STEPHEN BAUER (1969, 1969), *Instructor in English*. A.B., Hamilton College; M.A., Columbia University.
- EDWIN C. BAXLEY, JR. (1968, 1968), *Assistant Professor of Business Administration*. B.B.A., Baylor University; M.B.A., Louisiana State University.³

¹ Second semester, 1970-71.

² On leave of absence, second semester, 1970-71.

³ On leave of absence, 1970-71.

- DONALD J. BAXTER (1967, 1967), *Assistant Professor of Government*. A.B., Sacramento State College; M.A., Syracuse University.
- RUTH A. BECK (1969, 1969), *Instructor in Biology*. A.B., Radford College; M.Ed., University of Virginia.
- LAWRENCE S. BECKHOUSE (1968, 1968), *Assistant Professor of Sociology*. A.B., Knox College; M.A. and Ph.D., Vanderbilt University.
- MICHAEL E. BENDER (1970, 1970), *Associate Professor of Marine Science*. B.A., Southern Illinois University; M.S., Michigan State University; Ph.D., Rutgers University.
- RICHARD W. BESNIER (1967, 1967), *Instructor in Physical Education for Men*. B.S., University of Maryland; M.Ed., College of William and Mary.
- R. CARLYLE BEYER (1965, 1965), *Professor of History*. A.B., Hamline University; A.B. and M.A., Oxford University; Ph.D., University of Minnesota.
- KENNETH F. BICK (1966, 1961), *Professor of Geology*. B.S., M.S. and Ph.D., Yale University.
- ROBERT E. L. BLACK (1965, 1959), *Professor of Biology and Marine Science*. A.B., William Jewell College; Ph.D., University of Washington.
- MARVIN BLECHER (1970, 1970), *Adjunct Assistant Professor of Physics*. A.B., Columbia College; Ph.D., University of Illinois.
- HOWARD W. BLOOMBERG (1968, 1968), *Assistant Professor of Physics*. B.S., California Institute of Technology; M.S. and Ph.D., Northwestern University.
- JAMES P. BLOUNT (1970, 1967), *Instructor and Laboratory Technician in Modern Languages*.
- MARTHA MACDONALD BOELT (1968, 1968), *Instructor in English*. A.B., Erskine College; M.A., University of Maryland.
- ROBERT L. BOLUS (1970, 1970), *Instructor in Marine Science*. B.S. and M.S., Massachusetts Institute of Technology.
- MORRIS L. BREHMER (1961, 1959), *Professor of Marine Science*. B.S., Eastern Illinois University; M.S. and Ph.D., Michigan State University.

- GARNETT R. BROOKS, JR. (1967, 1962), *Associate Professor of Biology*. B.S. and M.S., University of Richmond; Ph.D., University of Florida.
- RICHARD B. BROOKS (1967, 1947, 1967), *Professor of Education*. B.P.E., Springfield College (Massachusetts); M.A., University of Pennsylvania; Ed.D., University of Virginia.
- JUDY BROWN (1971, 1971), *Lecturer in Education*. A.B., Emory and Henry College; M.Ed., College of William and Mary.¹
- MARION M. BROWN (1969, 1966), *Assistant Professor of Theatre and Speech*. A.B. and M.A., University of California at Los Angeles.
- RICHARD MAXWELL BROWN (1967, 1967), *Professor of History*. A.B., Reed College; A.M. and Ph.D., Harvard University.
- RONALD C. BROWN (1970, 1970), *Assistant Professor of Law*. B.S., University of Toledo; J.D., University of Toledo Law School; LL.M., University of Michigan Law School.
- G. WILLIAM BULLOCK, JR. (1967, 1967), *Associate Professor of Education*. A.B., Lynchburg College; M.Ed. and Ed.D., University of Virginia.
- T. DWIGHT BUNCE (1969, 1969), *Assistant Professor of Economics*. A.B., Williams College.
- WILLIAM L. BYNUM (1969, 1969), *Assistant Professor of Mathematics*. B.S., Texas Technological College; M.A. and Ph.D., University of North Carolina, Chapel Hill.
- MITCHELL A. BYRD (1963, 1956), *Professor of Biology*. B.S., M.S. and Ph.D., Virginia Polytechnic Institute.
- ROBERT J. BYRNE (1969, 1969), *Associate Professor of Marine Science*. M.S., University of Chicago; Ph.D., University of Chicago.
- DALE RALPH CALDER (1969, 1969), *Assistant Professor of Marine Science*. B.S., Acadia University; M.A. and Ph.D., College of William and Mary.
- GLORIA V. CALLARD (1971, 1971), *Lecturer in Biology*. B.S., Tufts University; M.S. and Ph.D., Rutgers University.¹
- IAN P. CALLARD (1968, 1966), *Associate Professor of Biology*. B.S. and Ph.D., The University of Sheffield (England).

¹ Second semester, 1970-71.

- JAMES W. CARPENTER (1966, 1966), *Instructor in Physical Education for Men*. A.B., Ohio Wesleyan University; M.A., Kent State University.
- JANE CARSON (1963, 1963), *Lecturer in History*. A.B., Flora Macdonald College; M.A. and Ph.D., University of Virginia.
- DENNIS H. CARTWRIGHT (1970, 1970), *Instructor in Mathematics*. A.B., West Georgia College; M.S., Clemson University.
- BENJAMIN RALPH CATO, JR. (1961, 1955), *Associate Professor of Mathematics*. A.B. and M.A., Duke University.
- LOUIS E. CATRON (1969, 1966), *Associate Professor of Theatre and Speech*. A.B., Millikin University; M.A. and Ph.D., Southern Illinois University.
- JAY LEE CHAMBERS (1970, 1970), *Associate Professor of Psychology*. A.B., George Washington University; M.A. and Ph.D., University of Kentucky.
- ROY L. CHAMPION (1967, 1967), *Assistant Professor of Physics*. B.S. and M.S., North Carolina State University at Raleigh; Ph.D., University of Florida.
- ROYCE W. CHESSER (1962, 1962), *Associate Professor of Education*. A.B., Wake Forest University; M.Ed., College of William and Mary.
- MARK E. CHITTENDEN (1969, 1969), *Assistant Professor of Marine Science*. A.B., Hobart College; M.S. and Ph.D., Rutgers University.
- PAUL N. CLEM (1968, 1959), *Professor of Education*. A.B., Bridge-water College; M.A. and Ed.D., Michigan State University.
- STEPHEN C. CLEMENT (1969, 1964), *Associate Professor of Geology*. A.B., Cornell University; M.S., University of Utah; Ph.D., Cornell University.
- WILLIAM S. COBB, JR. (1969, 1967), *Associate Professor of Philosophy*. A.B., Wake Forest University; B.D., Union Theological Seminary, New York; Ph.D., Vanderbilt University.¹
- JAMES W. COKE (1964, 1957), *Associate Professor of Modern Languages*. A.B., Western Kentucky University; M.A. and Ph.D., Indiana University.

¹ On leave of absence, first semester, 1970-71.

- GEORGE D. COLE, JR. (1968, 1968), *Assistant Professor of Business Administration*. A.B., Duke University; B.D., Yale University; Ed.D., Columbia University.
- HENRY E. COLEMAN (1968, 1964), *Assistant Professor of Fine Arts*. A.B., College of William and Mary; M.A., State University of Iowa.
- RANDOLPH A. COLEMAN (1970, 1970), *Assistant Professor of Chemistry*. A.B., Susquehanna University; Ph.D., Purdue University.
- TOM A. COLLINS (1970, 1970), *Assistant Professor of Law*. A.B., Indiana University; J.D., Indiana University-Indianapolis Law School; LL.M., University of Michigan Law School.
- JOHN W. CONLEE (1968, 1968), *Assistant Professor of English*. A.B., University of Southern California; M.A. and Ph.D., University of Illinois.
- LUTHER THOMAS CONNER, JR. (1964, 1964), *Assistant Professor of Mathematics*. B.S., Virginia Polytechnic Institute; M.A., University of North Carolina, Chapel Hill.
- HIBBERT DELL COREY (1943, 1929), *Professor of Business Administration*. A.B., University of Michigan; M.A., Ohio State University.
- JAMES A. CORNETTE, JR., (1970, 1970), *Instructor in English*. A.B., College of William and Mary; M.A., Duke University.
- BRADNER W. COURSEN (1969, 1968), *Professor of Biology*. A.B., Drew University; M.S. and Ph.D., University of Maryland.
- TAYLOR K. COUSINS (1968, 1968), *Assistant Professor of Economics*. B.S., University of Richmond.
- JAMES D. COWLES (1968, 1968), *Assistant Professor of Education*. B.S., University of Alabama; M.Ed., Rutgers University; Ph.D., University of Alabama.
- M. BOYD COYNER, JR. (1969, 1969), *Associate Professor of History*. A.B., M.A., and Ph.D. University of Virginia.
- ROBERT D. CRANE (1969, 1969), *Assistant Professor of Fine Arts*. A.B., University of Oklahoma; M.A. and M.F.A., University of Iowa.
- EDWARD P. CRAPOL (1967, 1967), *Assistant Professor of History*. B.S., State University of New York at Buffalo; M.S. and Ph.D., University of Wisconsin.

- GEORGE W. CRAWFORD (1960, 1960), *Associate Professor of Physics*. B.S., Davidson College; M.S., University of North Carolina; Ph.D., Ohio State University.
- PATRICIA B. CROWE (1965, 1965), *Assistant Professor of Physical Education for Women*. B.S., Sargent College, Boston University; M.S., University of North Carolina, Greensboro.
- FREDERIC R. CROWNFIELD, JR. (1968, 1956), *Professor of Physics*. A.B., Harvard College; M.S. and Ph.D., Lehigh University.
- RICHARD C. CURRY (1969, 1965), *Associate Professor of Government*. A.B., Eastern Michigan University; M.A. and Ph.D., University of Michigan.¹
- JEREMY F. CURTIN (1969, 1969), *Instructor in English*. A.B. and M.A., University of Toronto.
- WAGIH G. DAFASHY (1969, 1965), *Associate Professor of Business Administration*. B.Com., Ein Shams University, Cairo; M.B.A., University of Texas; Ph.D., University of Arkansas.
- JAMES S. DARLING (1961, 1961), *Lecturer in Music*. A.B., Yale University; B.M., Yale University School of Music; M.M., University of Michigan.
- CHARLES EDWARD DAVIDSON (1964, 1949), *Professor of English*. A.B., Princeton University; M.A. and Ph.D., Yale University.
- WILLIAM F. DAVIS, JR. (1968, 1960), *Associate Professor of English*. A.B., Princeton University; M.A. and Ph.D., Yale University.²
- WILLIAM JACKSON DAVIS (1963, 1963), *Associate Professor of Marine Science*. B.S., Virginia Polytechnic Institute; Ph.D., University of Kansas.
- CARL P. DAW, JR. (1970, 1970), *Assistant Professor of English*. A.B., Rice University; M.A. and Ph.D., University of Virginia.
- HUBERT A. DAW (1961, 1961), *Assistant Instructor in Psychology*. Associate Electronic Engineer, College of William and Mary (Norfolk).
- JEWELL L. DELAUNE (1966, 1966), *Lecturer in Education*. A.B., M.A. and B.S. in L.S. Louisiana State University.

¹ On leave of absence, 1970-71.

² On leave of absence, second semester, 1970-71.

- PETER L. DERKS (1965, 1960), *Associate Professor of Psychology*. A.B., KNOX College; M.A., Harvard University; Ph.D., University of Pennsylvania.
- EDMUND T. DERRINGE (1970, 1957), *Assistant Professor of Physical Education for Men*. B.S., Georgetown University; M.Ed., College of William and Mary.
- JAN B. DEWEYDENTHAL (1970, 1970), *Visiting Assistant Professor of Government*. LL.M., Jagiellonian University, Poland; Ph.D., University of Notre Dame.
- DAVID A. DICKEY (1969, 1969), *Instructor in Mathematics*. A.B. and M.S., Miami University.
- ELSA S. DIDUK (1968, 1966), *Assistant Professor of Modern Languages*. B.S., Temple University; M.A., Columbia University.
- CIRILA DJORDJEVIC (1968, 1968), *Associate Professor of Chemistry*. B.S., Zagreb University; Ph.D., University College, London (England).
- CARL R. DOLMETSCH (1967, 1959), *Professor of English*. A.B. and M.A., Drake University; Ph.D., University of Chicago.
- BIRDENA E. DONALDSON (1956, 1956), *Associate Professor of History*. A.B., Franklin College; M.A., Northwestern University; Ed.D., Columbia University.
- JOHN E. DONALDSON (1970, 1966), *Professor of Law*. A.B., University of Richmond; J.D., College of William and Mary; LL.M., Georgetown University.
- J. SCOTT DONALDSON (1969, 1966), *Associate Professor of English*. A.B., Yale University; M.A. and Ph.D., University of Minnesota.¹
- LYNN D. DOVERSPIKE (1967, 1967), *Assistant Professor of Physics*. B.S., Oklahoma State University; M.S., University of California, Los Angeles; Ph.D., University of Florida.
- JOHN H. DREW (1970, 1970), *Assistant Professor of Mathematics*. B.S., Case Institute of Technology; Ph.D., University of Minnesota.
- JOHN L. DUPUY (1968, 1968), *Assistant Professor of Marine Science*. B.S., Oglethorpe University; M.S., Rutgers, The State University; Ph.D., University of Washington.

¹ On leave of absence, 1970-71.

- ROBERT F. DURDEN (1970, 1970), *Harrison Professor of History*. A.B., and M.A., Emory University; M.A. and Ph.D., Princeton University.
- HUGH B. EASLER (1962, 1962), *Assistant Professor of Mathematics*. A.B., Wofford College; M.S., University of South Carolina.
- MORTON ECKHAUSE (1967, 1964), *Associate Professor of Physics*. A.B., New York University; M.S. and Ph.D., Carnegie Institute of Technology.
- VERNON H. EDMONDS (1967, 1967), *Associate Professor of Sociology*. A.B., Oklahoma State University; M.S., Purdue University; Ph.D., University of Missouri.
- JACK D. EDWARDS (1966, 1962), *Associate Professor of Government*. A.B., Macalester College; LL.B., Harvard Law School; Ph.D., Vanderbilt University.
- PIETER ELGERS (1970, 1970), *Assistant Professor of Business Administration*. B.B.A., Manhattan College; M.B.A., St. John's University.
- GEOFFREY D. ELLERSON, CAPTAIN (1969, 1969), *Instructor in Military Science*. B.S., United States Military Academy.
- NATHANIEL Y. ELLIOTT (1970, 1963), *Associate Professor of English*. B.S., State University of New York, Fredonia; M.A., Syracuse University; Ph.D., Cornell University.
- ANTHONY J. ESLER (1967, 1962), *Associate Professor of History*. A.B., University of Arizona; M.A. and Ph.D., Duke University.
- FRANK BROOKE EVANS, III (1961, 1947), *Professor of English*. A.B., Amherst College; M.A. and Ph.D., Princeton University.
- GLYNNE EVANS (1970, 1970), *Instructor in History*. M.A., University of St. Andrews, Scotland.¹
- JUDITH EWELL (1971, 1971), *Visiting Assistant Professor of History*. A.B., Duke University.²
- MICHAEL A. FAIA (1970, 1970), *Associate Professor of Sociology*. A.B., University of Southern California; M.A., University of Chicago; Ph.D., University of Southern California.
- JOSEPH P. FAMA (1970, 1970), *Assistant Professor of English*. A.B., Old Dominion University.

¹ First semester, 1970-71.

² Second semester, 1970-71.

- CHING SENG FANG (1969, 1969), *Assistant Professor of Marine Science*. B.S., National Taiwan University; M.S. and Ph.D., North Carolina State University.
- NANCY M. FARRISS (1968, 1968), *Assistant Professor of History*. A.B., Barnard College; Ph.D., University of London.¹
- CARL A. FEHR (1961, 1945), *Chancellor Professor of Music*. A.B. and M.A., University of Texas; M.Mus., University of Michigan; Ed.D., Columbia University.
- ROBERT J. FEHRENBACH (1969, 1967), *Associate Professor of English*. A.B., Westminster College, Missouri; M.A., Vanderbilt University; Ph.D., University of Missouri.
- NORMAN S. FIERING (1969, 1969), *Assistant Professor of History*. A.B., Dartmouth College; M.A. and Ph.D., Columbia University.
- WILLIAM M. FILES (1970, 1970), *Lecturer in Business Administration*. C.P.A.
- EMERIC FISCHER (1969, 1964), *Professor of Law*. B.S., University of South Carolina; B.C.L. and L.&T.M., College of William and Mary.
- S. STUART FLANAGAN (1968, 1968), *Assistant Professor of Education*. B.S., Washington and Lee University; M.Ed. and Ed.D., University of Virginia.
- MARY BETH FLOYD (1970, 1970), *Instructor in Modern Languages*. A.B. and M.A.T., Colorado State University; M.A., University of New Mexico.
- LEWIS A. FOSTER, JR. (1962, 1954, 1955), *Associate Professor of Philosophy*. A.B. and M.A., University of Virginia.¹
- HAROLD LEES FOWLER (1946, 1934), *Professor of History*. A.B., Dartmouth College; M.A. and Ph.D., Harvard University.
- ALVIN Z. FREEMAN (1969, 1967), *Professor of History*. B.S., Virginia Military Institute; M.A., Brown University; Ph.D., University of Toronto.
- MARGARET W. FREEMAN (1970, 1967), *Assistant Professor of English*. A.B., Brown University; M.A., Smith College; M.A., Middlebury College.

¹ On leave of absence, 1970-71.

- HERBERT FRIEDMAN (1967, 1963), *Associate Professor of Psychology*. A.B., Brooklyn College; M.A. and Ph.D., University of Connecticut.
- ALAN E. FUCHS (1969, 1969), *Assistant Professor of Philosophy*. B.S., Massachusetts Institute of Technology; M.A., Harvard University.
- PHILIP J. FUNIGIELLO (1966, 1966), *Assistant Professor of History*. A.B., Hunter College; M.A., University of California, Berkeley; Ph.D., New York University.
- HERBERT O. FUNSTEN (1968, 1963), *Professor of Physics*. A.B., M.A. and Ph.D., University of Virginia.
- ARMAND J. GALFO (1968, 1958), *Professor of Education*. A.B., M.Ed. and Ed.D., University of Buffalo.
- MARTIN A. GARRETT (1968, 1963), *Associate Professor of Economics*. B.S., Middle Tennessee State College; Ph.D., Vanderbilt University.
- S. PETER GARY (1970, 1970), *Assistant Professor of Physics*. B.S., Case Institute of Technology; M.A. and Ph.D., Washington University, St. Louis.
- KEVIN E. GEOFFROY (1969, 1965), *Associate Professor of Education*. A.B., Tufts University; M.Ed., Boston University; Ed.D., Arizona State University.
- DANIEL R. GERBER (1969, 1969), *Associate Professor of Education*. A.B., Goshen College; Ph.D., University of Denver.
- LARRY R. GERLACH (1970, 1970), *Visiting Assistant Professor of History*. B.S. and M.A., University of Nebraska; Ph.D., Rutgers University.
- NORMAN E. GIBBS (1969, 1969), *Assistant Professor of Mathematics*. B.S., Ursinus College; M.S. and Ph.D., Purdue University.
- T. CARTER GLEYSTEN (1970, 1970), *Assistant Professor of Business Administration*. A.B., Yale University.
- ASHTON L. GODLEY, JR. (1968, 1968), *Lecturer in Physical Education for Men*. A.B., Piedmont College.
- WILLIAM C. GOFF (1969, 1969), *Assistant Professor of Modern Languages*. A.B., University of Vermont; B.F.T., American Institute for Foreign Trade; M.A., Middlebury College.
- BRUCE K. GOODWIN (1966, 1963), *Associate Professor of Geology*. A.B., University of Pennsylvania; M.S. and Ph.D., Lehigh University.

- KAZUO GOTOW (1969, 1969), *Adjunct Professor of Physics*. B.S. and M.S., University of Tokyo; Ph.D., University of Rochester.
- BRUCE S. GRANT (1968, 1968), *Assistant Professor of Biology*. B.S., Bloomsburg State College; M.S. and Ph.D., North Carolina State University at Raleigh.
- GEORGE C. GRANT (1968, 1968), *Assistant Professor of Marine Science*. B.S., University of Massachusetts; M.A., College of William and Mary; Ph.D., University of Rhode Island.
- LEONARD L. GRAVES, JR. (1968, 1968), *Lecturer in Business Administration*. A.B., College of William and Mary.¹
- GEORGE W. GRAYSON, JR. (1970, 1968), *Associate Professor of Government*. A.B., University of North Carolina; M.A. and Ph.D., Johns Hopkins University.²
- ROBERT A. GRINCHUK (1970, 1970), *Visiting Assistant Professor of English*. A.B., Lehigh University; M.A., New York University.
- FRANZ L. GROSS (1970, 1970), *Associate Professor of Physics*. A.B., Swarthmore College; Ph.D., Princeton University.
- ANTHONY L. GUENTHER (1967, 1967), *Assistant Professor of Sociology*. A.B., Vanderbilt University; M.A., Northwestern University.
- MARK G. GULESIAN (1970, 1970), *Assistant Professor of Education*. A.B., Tufts University; M.Ed. and Ed.D., University of Massachusetts.
- ALBERT E. HAAK (1959, 1947), *Associate Professor of Theatre and Speech*. A.B., Lawrence College; M.A., College of William and Mary.
- PAUL A. HAEFNER, JR. (1969, 1969), *Associate Professor of Marine Science*. B.S., Franklin and Marshall College; M.S. and Ph.D., University of Delaware.
- GUSTAV W. HALL (1968, 1963), *Associate Professor of Biology*. A.B., and M.S., Ohio University; Ph.D., Indiana University.
- RONALD A. HALLETT (1970, 1970), *Assistant Professor of Modern Languages*. A.B. and M.A., Pennsylvania State University.

¹ First semester, 1970-71.

² On leave of absence, first semester, 1970-71.

- MARGARET L. HAMILTON (1969, 1953), *Professor of Government*. A.B., University of Michigan; M.A. and Ph.D., Columbia University.
- BEN A. HAMMACK (1958, 1958), *Lecturer in Psychology*. A.B. and Ph.D., University of Texas.
- ROBERT J. HANNY (1969, 1969), *Associate Professor of Education*. B.S., M.A., and Ph.D., Ohio State University.
- EUGENE RAE HARCUM (1965, 1958), *Professor of Psychology*. B.S., College of William and Mary; M.A., The Johns Hopkins University; Ph.D., University of Michigan.¹
- WILLIAM J. HARGIS, JR. (1959, 1955), *Professor of Marine Science*. A.B. and M.A., University of Richmond; Ph.D., Florida State University.
- WYMAN HARRISON (1968, 1968), *Professor of Marine Science*. B.S., M.S., and Ph.D., University of Chicago.
- CLYDE A. HAULMAN (1969, 1969), *Assistant Professor of Economics*. A.B., M.S., and Ph.D., Florida State University.²
- CAROLINE HAUSSEMMANN (1965, 1965), *Assistant Professor of Physical Education for Women*. A.B., Tufts University.³
- DEXTER S. HAVEN (1959, 1949), *Associate Professor of Marine Science*. B.S. and M.S., Rhode Island State College.
- STEVEN M. HAYNIE (1970, 1970), *Instructor in Physical Education for Men*. B.S., Northwestern State College; M.S., University of Tennessee.
- THOMAS L. HEACOX (1970, 1970), *Lecturer in English*. A.B., Pennsylvania State University; M.A., The Johns Hopkins University.
- BARBARA HEARN (1970, 1970), *Lecturer in Music*. A.B., Birmingham-Southern College; M.A.T., University of North Carolina, Chapel Hill.
- THOMAS K. HEARN, JR. (1968, 1965), *Associate Professor of Philosophy*. A.B., Birmingham-Southern College; B.D., Southern Baptist Theological Seminary; Ph.D., Vanderbilt University.
- P. WARREN HEEMANN (1966, 1962), *Assistant Professor of English*. A.B. and M.A., University of North Carolina.

¹ On leave of absence, first semester, 1970-71.

² On leave of absence, second semester, 1970-71.

³ On leave of absence, 1970-71.

- NEIL D. HEIMAN (1970, 1970), *Research Associate in Physics*. B.S., United States Naval Academy; Ph.D., The Johns Hopkins University.
- ROBERT W. HERRICK (1970, 1970), *Acting Instructor in Philosophy*. A.B., Oberlin College; M.A., University of Pittsburgh.¹
- DONALD J. HERRMANN (1963, 1951), *Professor of Education*. B.Ed., Northern Illinois University; M.A. and Ph.D., Michigan State University.
- TREVOR B. HILL (1970, 1963), *Professor of Chemistry*. B.S., University of Alberta, Canada; Ph.D., Cornell University.
- JOHN HODGES, COLONEL (1969, 1969), *Professor of Military Science*. A.B., College of William and Mary.
- E. LEWIS HOFFMAN (1968, 1947), *Professor of Modern Languages*. B.S., Roanoke College; M.A. and Ph.D., George Washington University.
- DAVID L. HOLMES, JR. (1968, 1965), *Assistant Professor of Religion*. A.B., Michigan State University; M.A., Columbia University; M.A., and Ph.D., Princeton University.
- H. LESTER HOOKER, JR. (1970, 1963), *Associate Professor of Physical Education for Men*. A.B., M.Ed., College of William and Mary.
- WRIGHT B. HOUGHLAND (1967, 1967), *Lecturer in Fine Arts*. B.Arch., University of Virginia.
- STANLEY HUMMEL (1966, 1964), *Research Engineer in Physics*.
- CRAIG R. HUMPHREY (1969, 1969), *Assistant Professor of Sociology*. A.B., Bowling Green State University; M.A., Brown University.
- MARTHA BIEN HUNSUCKER (1967, 1967), *Instructor in Modern Languages*. A.B., Barnard College; M.A., University of Virginia.
- JAMES HOWARD HUTSON (1969, 1969), *Lecturer in History*. A.B., M.A., and Ph.D., Yale University.
- PAUL V. HYER (1969, 1968), *Assistant Professor of Marine Science*. B.S., University of Notre Dame, Ph.D., University of Maryland.
- SATOSHI ITO (1966, 1965), *Assistant Professor of Sociology*. A.B., California State College at Long Beach; M.A. and Ph.D., University of North Carolina, Chapel Hill.²

¹ First semester, 1970-71.

² On leave of absence, first semester, 1970-71.

- CHRISTINA WHYTOCK JACKSON (1969, 1969), *Acting Assistant Professor of Physical Education for Women*. B.S. and M.Ed., Springfield College.
- DAVID CLAY JENKINS (1968, 1956), *Professor of English*. A.B. and M.A., University of Alabama; Ph.D., University of Iowa.
- JOHN E. JENKINS (1967, 1967), *Assistant Professor of Education*. A.B., University of Richmond; M.Ed., College of William and Mary.
- DUDLEY M. JENSEN (1962, 1951), *Associate Professor of Physical Education for Men*. B.S., Springfield College; M.A., Teachers College, Columbia University.
- GERALD H. JOHNSON (1970, 1965), *Associate Professor of Geology*. B.S., M.A. and Ph.D., Indiana University.
- HERBERT A. JOHNSON (1967, 1967), *Lecturer in History*. A.B., M.A. and Ph.D., Columbia University; LL.B., New York Law School.
- LUDWELL H. JOHNSON, III (1965, 1955), *Professor of History*. A.B. and Ph.D., The Johns Hopkins University.
- ROBERT A. JOHNSTON (1966, 1963), *Professor of Psychology*. A.B., Haverford College; M.A. and Ph.D., State University of Iowa.
- THOMAS H. JOLLS (1968, 1968), *Professor of Law*. A.B. and J.D., University of Michigan.
- DAVID H. JONES (1967, 1967), *Associate Professor of Philosophy*. A.B., University of Missouri; M.A. and Ph.D., Harvard University.
- EDWARD E. JONES (1966, 1963), *Assistant Professor of Physical Education for Men*. B.S. and M.Ed., College of William and Mary.
- GILBERT C. JONES (1964, 1964), *Assistant Professor of Business Administration*. M.B.A., Wharton School of Finance, University of Pennsylvania; J.D., College of William and Mary.
- J. WARD JONES, JR. (1967, 1961), *Chancellor Professor of Classical Studies*. A.B., University of Richmond; M.A. and Ph.D., University of North Carolina.
- ROBERT C. JONES (1967, 1967), *Associate Professor of Education*. B.S., Oklahoma City University; M.S., Oklahoma State University; Ph.D., University of Oklahoma.
- W. MELVILLE JONES (1953, 1928), *Chancellor Professor of English*. A.B., Allegheny College; M.A., Ohio State University; Ph.D., Harvard University.

- E. B. JOSEPH (1961, 1959), *Professor of Marine Science*. B.S., University of Florida; M.S. and Ph.D., Florida State University.
- ALEXANDER KALLOS (1964, 1949), *Professor of Modern Languages*. M.A. and Ph.D., University of Pennsylvania.
- JOHN ROBERT KANE (1968, 1964), *Assistant Professor of Physics*. B.S., Loyola College; M.S. and Ph.D., Carnegie Institute of Technology.
- EDWARD KATZ (1963, 1947), *Instructor in Chemistry*. B.S., College of William and Mary.
- FREDERICK Y. KAZAMA (1969, 1969), *Assistant Professor of Marine Science*. A.B., University of Nebraska; Ph.D., University of California.
- BARRY L. KEADLE (1970, 1970), *Lecturer in Physical Education for Men*. A.B., Marshall University; M.Ed., Lynchburg College.
- E. MORGAN KELLEY, JR. (1968, 1968), *Assistant Professor of Modern Languages*. A.B., Washington and Lee University; M.A. and Ph.D., Michigan State University.
- JON S. KERNER (1969, 1969), *Assistant Professor of Sociology*. B.S., Carroll College; M.A. and Ph.D., Indiana University.
- R. WAYNE KERNODLE (1953, 1945), *Professor of Sociology*. A.B., M.A. and Ph.D., University of North Carolina.
- RICHARD L. KIEFER (1968, 1965), *Associate Professor of Chemistry*. A.B., Drew University; Ph.D., University of California, Berkeley.
- HAMILTON KILLEN, JR. (1968, 1968), *Assistant Professor of Modern Languages*. A.B., University of Maryland; M.A. and Ph.D., Stanford University.
- CHONGHAN KIM (1970, 1964), *Professor of Government*. A.B., M.A. and Ph.D., Indiana University.
- SUNG BOK KIM (1968, 1968), *Assistant Professor of History*. A.B., Liberal Arts College, Seoul National University; M.A., University of Wisconsin; Ph.D., Michigan State University.
- ALGIN B. KING (1959, 1956), *Professor of Business Administration*. A.B., University of South Carolina; M.S., New York University; Ph.D., Ohio State University.
- MARCIA MARIE KOLLER (1968, 1968), *Lecturer in Music*. A.B., University of Minnesota.

- JAMES D. KORNWOLF (1968, 1968), *Assistant Professor of Fine Arts*. B.F.A., University of Illinois; M.A., University of Wisconsin; Ph.D., Courtauld Institute of Art, University of London.
- WILLIAM J. KOSSLER (1970, 1969), *Associate Professor of Physics*. B.S., Massachusetts Institute of Technology; Ph.D., Princeton University.
- DAVID E. KRANBUEHL (1970, 1970), *Assistant Professor of Chemistry*. A.B., DePauw University; Ph.D., University of Wisconsin.
- BETTE JO KREMER (1970, 1970), *Instructor in Theatre and Speech*. A.B., Butler University; M.A., Bowling Green State University.
- ALBERT Y. KUO (1970, 1970), *Assistant Professor of Marine Science*. B.S., Taiwan University; M.S., University of Iowa; Ph.D., The Johns Hopkins University.
- ALEXANDER I. KURTZ (1967, 1962), *Associate Professor of Modern Languages*. Licentiate and M.A., Leopold-Francis University, Innsbruck, Austria; M.A., Rutgers University; Th.D., Leopold-Francis University.
- STEPHEN G. KURTZ (1966, 1966), *Lecturer in History*. A.B., Princeton University; Ph.D., University of Pennsylvania.
- ANN T. LAMBERT (1969, 1969), *Assistant Professor of Physical Education for Women*. B.S., Appalachian State University; M.S.P.E., University of North Carolina, Greensboro.
- J. WILFRED LAMBERT (1959, 1931), *Professor of Psychology*. A.B., College of William and Mary.
- JOHN F. LAVACH (1970, 1967), *Associate Professor of Education*. A.B., Montclair State College; M.A., Fairleigh Dickinson University; Ed.D., Duke University.
- JAMES D. LAVIN (1970, 1968), *Associate Professor of Modern Languages*. A.B. and Ph.D., Florida State University.
- JAMES D. LAWRENCE, JR. (1968, 1960), *Adjunct Professor of Physics*. B.S., Virginia Military Institute; M.A. and Ph.D., University of Virginia.
- SIDNEY H. LAWRENCE (1965, 1961), *Associate Professor of Mathematics*. A.B., M.A. and Ph.D., University of Virginia.
- DAWN LAZANAS (1968, 1968), *Assistant Professor of Education*. B.Ph. and M.A., DePaul University; Ed.D., University of Virginia.

- LEWIS W. LEADBEATER (1968, 1965), *Associate Professor of Classical Studies*. A.B., University of Pittsburgh; M.A. and Ph.D., New York University.
- HERMIONE LEE (1970, 1970), *Instructor in English*. A.B., St. Hilda's College, Oxford; B.Phil., St. Cross College, Oxford.
- VERA ZATHURECZKY LENDVAY (1969, 1969), *Lecturer in Music*. Diploma, Professor of Music and Performing Artist, Franz Liszt Academy of Music.
- VICTOR A. LIGUORI (1970, 1964), *Associate Professor of Sociology*. A.B., Haverford College; M.A. and Ph.D., Princeton University.
- MONT LINKENAUER (1969, 1960), *Associate Professor of Physical Education for Men*. B.S. and M.Ed., College of William and Mary; R.P.T., Medical College of Virginia.
- JAMES C. LIVINGSTON (1968, 1968), *Associate Professor of Religion*. A.B., Kenyon College; B.D., Union Theological Seminary, New York; Ph.D., Columbia University.
- DON W. LLEWELLYN (1970, 1969), *Associate Professor of Law*. A.B., Dickinson College; J. D., Dickinson School of Law; LL.M., New York University.
- JOSEPH LOESCH (1969, 1969), *Assistant Professor of Marine Science*. B.S., University of Rhode Island; M.S. and Ph.D., University of Connecticut.
- JOHN H. LONG (1968, 1955), *Associate Professor of Physics*. B.S., U. S. Naval Academy; M.S., Harvard University.
- EDRIL LOTT (1963, 1950), *Associate Professor of Secretarial Science*. A.B., Mississippi State College for Women; M.A., Mississippi Southern University.
- ROBERT P. MACCUBBIN (1968, 1964), *Assistant Professor of English*. A.B., The Johns Hopkins University; M.A. and Ph.D., University of Illinois.
- FRANK A. MACDONALD (1955, 1955), *Professor of Philosophy*. A.B. and M.A., College of William and Mary; M.A., Harvard University.
- ALEXANDER P. MACGREGOR, JR. (1968, 1966), *Assistant Professor of Classical Studies*. A.B., Xavier University; M.A. and Ph.D., University of Chicago.

- WILLIAM G. MACINTYRE (1965, 1965), *Assistant Professor of Marine Science*. B.S., M.S. and Ph.D., Dalhousie University.
- ROBERT MAIDMENT (1970, 1970), *Associate Professor of Education*. B.S., M.Ed., and Ed.D., University of Virginia.
- CHARLOTTE P. MANGUM (1968, 1964), *Associate Professor of Biology*. A.B., Vassar College; M.S. and Ph.D., Yale University.
- JAMES E. MARLOW (1969, 1969), *Instructor in English*. A.B., Dartmouth College; M.A., University of California, Davis.
- CHARLES F. MARSH (1968, 1930, 1968), *Lecturer in Business Administration*. A.B., Lawrence College; M.A. and Ph.D., University of Illinois.
- J. LUKE MARTEL (1963, 1963), *Associate Professor of Modern Languages*. A.B., University of Arizona; Licence ès Lettres, Université de Montpellier; Doctorat Université d'Aix-Marseille.¹
- MARTIN C. MATHES (1967, 1967), *Associate Professor of Biology*. A.B., Miami University; M.S. and Ph.D., University of Maryland.
- JOHN R. MATTHEWS, JR. (1963, 1961), *Associate Professor of Economics*. B.S. and M.A., University of Virginia.
- GILBERT H. MCARTHUR (1966, 1966), *Assistant Professor of History*. A.B., Friends University; Ph.D., University of Rochester.
- TERENCE McCANN (1969, 1969), *Visiting Lecturer in Anthropology*. A.B., University of Durham; B. Litt., University of Oxford.²
- CARL W. MCCARTHA (1965, 1955), *Professor of Education*. A.B., Newberry College; M.A., University of North Carolina; Ed.D., University of Florida.
- JAMES N. MCCORD, JR. (1969, 1965), *Associate Professor of History*. A.B., Emory University; M.A. and Ph.D., The Johns Hopkins University.
- WILLIAM MCCORMICK, JR. (1969, 1969), *Associate Professor of Business Administration*. B.S. and M.B.A., Indiana University; Ph.D., Case Western Reserve University.
- CECIL M. MCCULLEY (1963, 1948), *Professor of English*. A.B. and M.A., Southern Methodist University; Ph.D., Columbia University.

¹ On leave of absence, 1970-71.

² First semester, 1970-71.

- BRUCE T. McCULLY (1961, 1940), *Professor of History*. A.B., Rutgers University; M.A. and Ph.D., Columbia University.
- NANCY B. McGHEE (1971, 1971), *Visiting Professor of English*. A.B., Shaw University; M.A., Columbia University; Ph.D., University of Chicago.¹
- VIRGIL V. McKENNA (1967, 1962), *Associate Professor of Psychology*. A.B., College of William and Mary; M.A., Swarthmore College; Ph.D., Princeton University.
- JOHN L. McKNIGHT (1968, 1957), *Professor of Physics*. A.B., University of Michigan; M.S. and Ph.D., Yale University.
- HENRY E. McLANE (1967, 1965), *Associate Professor of Philosophy*. A.B., George Washington University; M.A. and Ph.D., Yale University.
- WILLIAM G. McNAIRY (1970, 1967), *Lecturer in Business Administration*. B.S., University of North Carolina; M.B.A., University of Virginia.
- SHIRLEY M. MEEKER (1969, 1969), *Acting Assistant Professor of Government*. A.B., University of North Dakota; M.A. and Ph.D., University of Iowa.
- WILLIAM R. MELVIN (1970, 1970), *Assistant Professor of Mathematics*. B.S. and Ph.D., Brown University.
- JOHN V. MERRINER (1970, 1970), *Instructor in Marine Science*. A.B., Rutgers University; M.S., North Carolina State University.
- TERRY L. MEYERS (1970, 1970) *Instructor in English*. A.B., Lawrence University; M.A., University of Chicago.
- PATRICK H. MICKEN (1970, 1966), *Assistant Professor of Theatre and Speech*. B.S. and M.S., Southern Illinois University.
- LAWRENCE A. MILLER (1968, 1968), *Assistant Professor of Theatre and Speech*. B.F.A., Carnegie Institute of Technology; M.F.A., Carnegie-Mellon University.
- ROBERT ALAN MILLER (1970, 1970), *Research Associate in Physics*. B.S., M.S., and Ph.D., University of Illinois.

¹ Second semester, 1970-71.

- ROBERT S. MILLER (1969, 1969), *Assistant Professor of Sociology*. A.B., University of Florida; M.A., University of North Carolina, Chapel Hill; Ph.D., Florida State University.
- THELMA MILLER (1957, 1954), *Assistant Professor of Home Economics*. A.B., Berea College; M.S., University of Tennessee.
- ESTHER B. MILLS (1968, 1968), *Associate Professor of Education*. B.S., Wayne State University; M.Ed. and Ed.D., University of Maryland.
- JOSEPH A. MIRI (1970, 1970), *Assistant Professor of Government*. A.B., Wesleyan University; M.A., Rutgers University.
- WARREN E. MITCHELL (1966, 1966), *Instructor in Physical Education for Men*. A.B., University of Richmond.
- RICHARD W. MONCURE (1969, 1969), *Instructor in Marine Science*. B.S., Virginia Polytechnic Institute.
- CARLISLE E. MOODY (1970, 1970), *Visiting Assistant Professor of Economics*. A.B., Colby College; M.A. and Ph.D., University of Connecticut.
- JOHN A. MOORE (1965, 1950), *Professor of Modern Languages*. B.S., Davidson College; M.A. and Ph.D., University of North Carolina.
- JUNE MORELAND (1970, 1970), *Instructor in Modern Languages*. A.B., University of Georgia; M.A., University of North Carolina, Chapel Hill.
- WILLIAM WARNER MOSS, JR. (1937, 1937), *John Marshall Professor of Government and Citizenship*. A.B., University of Richmond; M.A. and Ph.D., Columbia University.
- JOHN C. MUNDAY, JR. (1969, 1969), *Assistant Professor of Marine Science*. A.B., Cornell University; Ph.D., University of Illinois.
- JOHN A. MUSICK (1970, 1968), *Assistant Professor of Marine Science*. A.B., Rutgers, The State University; M.A., Harvard University.
- FRASER NEIMAN (1958, 1938), *Professor of English*. A.B., Amherst College; M.A. and Ph.D., Harvard University.¹
- FRANCES H. NELSON (1968, 1968), *Lecturer in Education*. A.B., Winthrop College; M.Ed., College of William and Mary.
- ANNE TYLER NETICK (1967, 1962), *Assistant Professor of Modern Languages*. A.B., Randolph-Macon Woman's College; M.A., Columbia University.

¹ On leave of absence, 1970-71.

- ELSA NETTELS (1969, 1967), *Associate Professor of English*. A.B., Cornell University; M.A. and Ph.D., University of Wisconsin.
- RICHARD K. NEWMAN, JR. (1966, 1946), *Professor of Fine Arts*. A.B., Dartmouth College; Ph.D., Yale University.
- MAYNARD M. NICHOLS (1961, 1961), *Associate Professor of Marine Science*. B.S., Columbia University; M.S., Scripps Institute of Oceanography; Ph.D., University of California, Los Angeles.
- J. J. NORCROSS (1965, 1959), *Associate Professor of Marine Science*. A.B., William Jewel College; M.S., Michigan State University.
- WILLIAM E. O'CONNELL, JR. (1969, 1969), *Assistant Professor of Business Administration*. A.B., Manhattan College; M.B.A., Columbia University; D.B.A., Indiana University.
- LESLIE DOLE O'NEIL (1967, 1967), *Instructor in Modern Languages*. A.B., Kansas State University; M.A., University of Cincinnati.
- PETER V. O'NEIL (1969, 1967), *Associate Professor of Mathematics*. B.S., Fordham University; M.S. and Ph.D., Rensselaer Polytechnic Institute.
- ROBERT A. ORWOLL (1969, 1969), *Assistant Professor of Chemistry*. A.B., St. Olaf College; Ph.D., Stanford University.
- CURTIS H. O'SHELL (1968, 1968), *Associate Professor of Education*. B.A., Pennsylvania State University; M.A., Allegheny College; Ed.D., Pennsylvania State University.
- FRANKLYN D. OTT (1970, 1970), *Assistant Professor of Marine Science*. B.S., Lynchburg College; Ph.D., University of Kansas.
- PIERRE C. OUSTINOFF (1958, 1953), *Professor of Modern Languages*. A.B., M.A. and Ph.D., Columbia University.
- STEPHEN P. PALEDES (1968, 1954), *Associate Professor of Music*. Juilliard School of Music; A.B. and M.A., American University.
- MARIA ROBREDO PALMAZ (1968, 1964), *Instructor in Modern Languages*. A.B., National Institute of Modern Languages, Buenos Aires; M.A., University of Cordoba; Diplôme De Culture Française Contemporaine, University of Paris.
- DIANA L. PARSONS (1969, 1969), *Instructor in English*. A.B. and M.A., Ohio University.
- SLOANE W. PAYNE, JR. (1970, 1970), *Assistant Professor of Psychology*. A.B., University of North Carolina, Chapel Hill.

- MARSHA PEEBLES (1970, 1970), *Acting Instructor in Sociology*. A.B., Mississippi College for Women; M.A., Mississippi State University.
- CLIFFORD H. PENCE, JR. (1970, 1970), *Instructor in Theatre and Speech*. A.B., College of William and Mary; M.S., Temple University.
- CHARLES F. PERDRISAT (1969, 1966), *Associate Professor of Physics*. B.S., University of Geneva; D.Sc., Federal Institute of Technology, Zurich.
- FRANK O. PERKINS (1966, 1966), *Assistant Professor of Marine Science*. A.B., University of Virginia; M.S. and Ph.D., Florida State University.
- JOHN M. PETERSON (1971, 1971), *Lecturer in Business Administration*. A.B., College of William and Mary.¹
- ARTHUR WARREN PHELPS (1945, 1945), *Professor of Law*. A.B., Washington and Lee University; M.A., Ohio State University; J. D., University of Cincinnati; LL.M., Columbia University.
- HELEN M. PIKE (1970, 1970), *Instructor in English*. A.B. and M.A., Hunter College.
- WILLIAM CARTER POLLARD (1966, 1966), *Librarian*. A.B., University of North Carolina; M.A., Florida State University.
- WILLIAM G. POOLE, JR. (1970, 1970), *Assistant Professor of Mathematics*. A.B. and M.A., University of Texas; Ph.D., University of California, Berkeley.
- PAUL S. POTTINGER (1971, 1971), *Acting Assistant Professor of Psychology*. B.S. Denison University.¹
- BOLLING RAINES POWELL, JR. (1969, 1969), *Professor of Law*. A.B., Birmingham-Southern College; M.A. and LL.B., University of Virginia.
- WILLIAM E. POWELL, MAJOR (1969, 1969), *Assistant Professor of Military Science*. A.B., Virginia Military Institute.
- RICHARD J. POWERS (1970, 1970), *Adjunct Assistant Professor of Physics*. B.S., Illinois Institute of Technology; M.S. and Ph.D., University of Chicago.
- F. DOUGLAS PRILLAMAN (1969, 1969), *Associate Professor of Education*. B.S., Lincoln Memorial University; M.Ed., College of William and Mary.

¹ Second semester, 1970-71.

- RICHARD H. PROSL (1969, 1966), *Associate Professor of Mathematics*. B.S., College of William and Mary; A.B. and M.A., University College, Oxford; M.S. and Ph.D., Rensselaer Polytechnic Institute.
- JOHN S. QUINN (1959, 1949, 1956), *Professor of Business Administration*. B.S., State Teachers College, Salem, Massachusetts; M.C.S., Boston University; M.B.A., Harvard University; C.P.A.
- CHARLES L. QUITMEYER (1962, 1948, 1962), *Professor of Business Administration*. A.B., College of William and Mary; M.B.A., Harvard University; Ph.D., Columbia University.
- LARRY RABINOWITZ (1968, 1968), *Assistant Professor of Mathematics*. A.B., M.S., and Ph.D., Rutgers University.
- JOHN H. RANDOLPH (1969, 1967), *Instructor in Physical Education for Men*. A.B. and M.Ed., College of William and Mary.
- ELIZABETH S. REED (1968, 1955), *Associate Professor of Philosophy*. A.B., Butler University; M.A., Florida State University; Ph.D., Duke University.
- GORDON S. REID (1969, 1969), *Visiting Professor of Government*. B. Com., University of Melbourne; Ph.D., London School of Economics.¹
- LINDA COLLINS REILLY (1969, 1969), *Assistant Professor of Classical Studies*. A.B., Vassar College; M.A. and Ph.D., Johns Hopkins University.
- THEODORE R. REINHART (1968, 1968), *Assistant Professor of Anthropology*. A.B., Pennsylvania State University; M.A., George Washington University; Ph.D., University of New Mexico.²
- EDWARD A. REMLER (1970, 1967), *Associate Professor of Physics*. B.S., Massachusetts Institute of Technology; M.S., Columbia University; Ph.D., University of North Carolina, Chapel Hill.
- THOMAS L. REYNOLDS (1960, 1960), *Professor of Mathematics*. B.S., Guilford College; M.A. and Ph.D., University of North Carolina.
- EDWIN H. RHYNE (1966, 1954), *Professor of Sociology*. B.S., Clemson University; M.A. and Ph.D., University of North Carolina.
- LAURA H. RHYNE (1970, 1965), *Acting Assistant Professor of Sociology*. A.B., and M.A., University of Georgia.

¹ First semester, 1970-71.

² On leave of absence, first semester, 1970-71.

ROGER R. RIES (1968, 1968), *Assistant Professor of Education*. B.S., M.Ed. and Ph.D., University of Missouri.

EDWARD MILES RILEY (1963, 1963), *Lecturer in History*. A.B., Washington and Lee University; M.A. and Ph.D., University of Southern California.

ROBIN L. ROARK (1968, 1968), *Lecturer in Music*. B.M., Oklahoma Baptist University; M.S., University of Southern California.

SHIRLEY G. ROBY (1970, 1964), *Associate Professor of Physical Education for Women*. B.S., Longwood College; M.F.A., University of North Carolina, Greensboro.

JAMES M. ROHERTY (1967, 1963), *Professor of Government*. A.B. and M.A., University of Washington; Ph.D., University of Wisconsin.

CARL A. ROSEBERG (1966, 1947), *Professor of Fine Arts*. B.F.A. and M.F.A., State University of Iowa; Life Fellow, International Institute of Arts and Letters.

GEORGE T. RUBLEIN (1966, 1966), *Associate Professor of Mathematics*. B.S., St. Mary's University; M.S. and Ph.D., University of Illinois.

EVON P. RUZECKI (1965, 1965), *Assistant Professor of Marine Science*. A.B., Knox College; M.S., University of Wisconsin.

RONALD R. SAINT-ONGE (1970, 1970), *Assistant Professor of Modern Languages*. A.B., Providence College; M.A. and Ph.D., Vanderbilt University.

ANTHONY L. SANCETTA (1961, 1948), *Professor of Business Administration*. A.B., Western Reserve University; M.S. and Ph.D., Columbia University.

ANTHONY J. SANTORO (1970, 1970), *Assistant Professor of Law*. A.B., Boston College; J.D. and LL.M., Georgetown University Law Center.

JAGDISH C. SANWAL (1966, 1966), *Associate Professor of Mathematics*. B.S. and M.S., Lucknow University, India; Ph.D., Indiana University.

JAMES B. SAVAGE (1970, 1970), *Assistant Professor of English*. A.B., Princeton University; M.A., Northwestern University.

HOWARD M. SCAMMON, JR. (1967, 1948), *Professor of Theatre and Speech*. A.B., College of William and Mary; M.A., Northwestern University.

- MELVYN D. SCHIAVELLI (1968, 1968), *Assistant Professor of Chemistry*. B.S., DePaul University; Ph.D., University of California, Berkeley.
- LEONARD G. SCHIFRIN (1970, 1965) *Professor of Economics*. A.B. and M.A., University of Texas; Ph.D., University of Michigan.
- ROBERT J. SCHOLNICK (1967, 1967), *Assistant Professor of English*. A.B., University of Pennsylvania; M.A. and Ph.D., Brandeis University.
- SYLVIA H. SCHOLNICK (1971, 1971), *Lecturer in Religion*. A.B., Wellesley College; M.A., Brandeis University.¹
- HARLAN E. SCHONE (1968, 1965), *Associate Professor of Physics*. B.S., University of Illinois; Ph.D., University of California, Berkeley.
- JOSEPH LEE SCOTT (1970, 1970), *Assistant Professor of Biology*. A.B. and M.A., University of California, Santa Barbara.
- ROBERT E. SCOTT (1970, 1969), *Assistant Professor of Law*, A.B. Oberlin College; J.D., College of William and Mary; LL.M., University of Michigan.
- JOHN E. SELBY (1970, 1963), *Professor of History*. A.B., Harvard College; M.A. and Ph.D., Brown University.
- KELLY G. SHAVER (1968, 1968), *Assistant Professor of Psychology*. B.S. and M.S., University of Washington; Ph.D., Duke University.
- GLENN D. SHEAN (1970, 1966), *Associate Professor of Psychology*. A.B., Louisiana State University, New Orleans; M.A. and Ph.D., University of Arizona.²
- THOMAS F. SHEPPARD (1969, 1969), *Assistant Professor of History*. A.B., Vanderbilt University; M.A., University of Nebraska; Ph.D., The Johns Hopkins University.
- ARDEN SHER (1967, 1967), *Associate Professor of Physics*. B.S. and Ph.D., Washington University, St. Louis.
- MARY K. SHERIDAN (1971, 1971), *Lecturer in English*. A.B. and M.A., University of Illinois.¹
- RICHARD B. SHERMAN (1970, 1960), *Professor of History*. A.B. Harvard University; M.A., University of Pennsylvania; Ph.D., Harvard University.

¹ Second semester, 1970-71.

² On leave of absence, second semester, 1970-71.

- ROGER SHERMAN (1966, 1946, 1966), *Associate Professor of Theatre and Speech*. A.B., College of William and Mary.
- ROBERT T. SIEGEL (1963, 1963), *Professor of Physics*. B.S., M.S. and D.Sc., Carnegie Institute of Technology.
- JARID A. SIMONS (1967, 1967), *Assistant Professor of Biology*. A.B., Washington University, St. Louis; Ph.D., Yale University.
- BRUCE LAMBERT SISCO, JR., CAPTAIN (1969, 1969), *Assistant Professor of Military Science*. A.B., University of Chattanooga.
- CAROL ANN SMITH (1970, 1970), *Acting Assistant Professor of Philosophy*. A.B. and M.A., University of Western Ontario.
- CRAIG L. SMITH (1970, 1970), *Assistant Professor of Marine Science*. A.B., The Johns Hopkins University; Ph.D., University of Florida.
- GARY A. SMITH (1969, 1969), *Assistant Professor of Modern Languages*. A.B., University of Kansas; Ph.D., University of Texas.
- HOWARD M. SMITH, JR. (1965, 1946), *Professor of Physical Education for Men*. B.S., College of William and Mary; M.S., Syracuse University.
- JAMES E. SMITH (1970, 1970), *Assistant Professor of Business Administration*. A.B., Southeastern Louisiana College; M.B.A., University of Houston.
- JERRY C. SMITH (1969, 1969), *Assistant Professor of Modern Languages*. A.B., University of Texas; M.A. and Ph.D., Cornell University.
- LEROY W. SMITH (1967, 1956), *Professor of English*. A.B., American University; M.A., George Washington University; Ph.D., Duke University.
- ROBERT E. SMITH (1946, 1946), *Associate Professor of Physics*. A.B., Allegheny College; M.A., University of North Carolina, Chapel Hill.
- ROGER W. SMITH (1967, 1967), *Assistant Professor of Government*. A.B., Harvard College; M.A., University of California, Berkeley.¹
- JON F. SOEST (1968, 1967), *Assistant Professor of Physics*. A.B., Pomona College; M.S. and Ph.D., University of Washington.

¹ On leave of absence, second semester, 1970-71.

- RAYMOND W. SOUTHWORTH (1966, 1966), *Professor of Mathematics*. B.S., Worcester Polytechnic Institute; M.Eng. and D.Eng., Yale University.
- BERNICE M. SPEESE (1969, 1946), *Associate Professor of Biology*. B.S. and M.A., College of William and Mary; Ph.D., University of Virginia.
- K. SRIDHARAN (1970, 1970), *Lecturer in Business Administration*. A.B., Madras Christian College; M.B.A., College of William and Mary.
- DAVID P. STANFORD (1967, 1967), *Assistant Professor of Mathematics*. A.B., Hartwick College; M.A. and Ph.D., University of North Carolina, Chapel Hill.
- MARVIN M. STANLEY (1968, 1968), *Assistant Professor of Business Administration*. B.S., George Washington University; M.B.A., Harvard University.
- E. BLYTHE STASON, JR. (1967, 1963), *Associate Professor of Law*. A.B., M.A. and J.D., University of Michigan; LL.M., Harvard University.
- ALAN C. STEWART (1968, 1944), *Professor of Music*. A.B., Union College; M.A., Columbia University.
- HOWARD STONE (1963, 1948), *Professor of Modern Languages*. A.B., Pomona College; M.A., Claremont Graduate School and University Center; Ph.D., University of California, Berkeley.
- GEORGE V. STRONG (1969, 1967), *Assistant Professor of History*. A.B., M.A. and Ph.D., University of North Carolina, Chapel Hill.
- ROBERT H. SWANSBROUGH (1970, 1970), *Visiting Assistant Professor of Government*. A.B., Long Beach State College; M.A., University of California, Santa Barbara.
- THOMAS A. SWARDELL, MAJOR (1968, 1968), *Assistant Professor of Military Science*. B.S., Indiana University of Pennsylvania.
- WILLIAM F. SWINDLER (1958, 1958), *Professor of Law*. A.B. and B.S., Washington University, St. Louis; M.A. and Ph.D., University of Missouri; LL.B., University of Nebraska.
- JOHN W. SYKES (1970, 1963), *Associate Professor of Education*. B.S., New York State College; M.Ed., University of Virginia.
- PETER SYKES (1970, 1970), *Visiting Research Professor of Chemistry*. B.Sc. and M.Sc., University of Manchester; Ph.D., Clare College, Cambridge University.

- JESSE S. TARLETON (1970, 1970), *Assistant Professor of Business Administration*. B.S., Pennsylvania State University; M.B.A., College of William and Mary; Ph.D., Cornell University.
- THADDEUS W. TATE, JR. (1969, 1961), *Professor of History*. A.B. and M.A., University of North Carolina; Ph.D., Brown University.¹
- C. RICHARD TERMAN (1969, 1963), *Professor of Biology*. A.B., Albion College; M.S. and Ph.D., Michigan State University.
- ELAINE M. THEMO (1966, 1966), *Assistant Professor of Sociology*. A.B., Mount Holyoke College; M.A., University of North Carolina; Ph.D., American University.²
- DAVID W. THOMPSON (1970, 1967), *Associate Professor of Chemistry*. B.S., Wheaton College; Ph.D., Northwestern University.
- THOMAS E. THORNE (1965, 1940), *Professor of Fine Arts*. B.F.A., Yale University.
- JANET TOMLINSON (1969, 1965), *Assistant Professor of Physical Education for Women*. A.B., Beloit College; M.A., University of Iowa.
- LELAND E. TRAYWICK (1967, 1967), *Professor of Business Administration*. A.B. and M.A., University of Missouri; Ph.D., University of Illinois.
- F. DONALD TRUESDELL (1963, 1960), *Professor of Music*. B.M. and M.M., University of Michigan; A.M.D., University of Rochester.
- WILLIAM C. TURNER (1969, 1960), *Associate Professor of Mathematics*. B.S., Furman University; M.A., Duke University.
- J. ALLEN TYLER, (1969, 1969), *Assistant Professor of Modern Languages*. B.S., Virginia Polytechnic Institute; M.A., Middlebury College.
- SHEPPARD YOUNG TYREE, JR. (1966, 1966), *Professor of Chemistry*. B.S. and Ph.D., Massachusetts Institute of Technology.
- HORACE UNDERWOOD (1970, 1970), *Lecturer in Physical Education for Men*. A.B., University of Richmond.
- PAUL UNGER (1968, 1968), *Professor of Education*. A.B., Western Michigan University; M.A. and Ph.D., University of Michigan.
- WILLARD A. VAN ENGEL (1961, 1946), *Professor of Marine Science*. Ph.B. and Ph.M., University of Wisconsin.

¹ On leave of absence, 1970-71.

² On leave of absence, second semester, 1970-71.

- MARION G. VANFOSSEN (1970, 1967), *Professor of Sociology*. A.B., Blackburn College; M.A., Pennsylvania State University; Ph.D., Emory University.
- JACK D. VAN HORN (1970, 1970), *Assistant Professor of Religion*. A.B., Ohio Wesleyan University; M.A., Columbia University.
- WEBSTER VAN WINKLE, JR. (1967, 1967), *Assistant Professor of Biology*. A.B., Oberlin College; Ph.D., Rutgers University.¹
- CHARLES R. VARNER (1968, 1953), *Professor of Music*. B.M.E. and M.M., Northwestern University.
- W. LARRY VENTIS (1969, 1969), *Assistant Professor of Psychology*. B.S. and M.A., University of Tennessee.
- CARL W. VERMEULEN (1966, 1966), *Assistant Professor of Biology*. A.B., Hope College; M.S. and Ph.D., University of Illinois.
- HANS C. VON BAEYER (1970, 1968), *Associate Professor of Physics*. A.B., Columbia College; M.Sc., University of Miami; Ph.D., Vanderbilt University.
- RICHARD E. WALCK (1970, 1970), *Assistant Professor of Law*. A.B., Pennsylvania State University; LL.B. University of Virginia.
- HELEN C. WALKER (1969, 1969), *Assistant Professor of History*. A.B., College of William and Mary; M.A., Yale University.
- J. LEWIS WALKER, III (1967, 1967), *Instructor in English*. A.B., University of Virginia; M.A., University of California, Berkeley.
- CAROL A. WALLACE (1970, 1963), *Associate Professor of Physical Education for Women*. A.B., Hollins College; M.A., Sarah Lawrence College.
- ALAN JOSEPH WARD (1969, 1967), *Associate Professor of Government*. B.Sc., University of London; M.A., University of Connecticut; Ph.D., University of London.
- STEWART A. WARE (1967, 1967), *Assistant Professor of Biology*. B.S., Millsaps College; Ph.D., Vanderbilt University.
- JUNIUS ERNEST WARINNER, III (1963, 1963), *Instructor in Marine Science*. B.S. and M.A., College of William and Mary.
- LELAND E. WARREN (1969, 1969), *Instructor in English*. A.B., Emory University; M.A., University of Georgia.

¹ On leave of absence, 1970-71.

- WILLIAM H. WARREN (1970, 1970), *Associate Professor of Business Administration*. B.S., University of Richmond; M.S. and Ph.D., Purdue University.
- MARVIN L. WASS (1960, 1960), *Associate Professor of Marine Science*. B.S., Winona State College; M.S., Florida State University; Ph.D., University of Florida.
- KENNETH L. WEBB (1965, 1965), *Assistant Professor of Marine Science*. A.B., Antioch College; M.S. and Ph.D., Ohio State University.
- GIDEON WEISZ (1968, 1968), *Assistant Professor of Physics*. B.S., M.S. and Ph.D., University of Chicago.
- ROBERT H. WELCH (1970, 1970), *Instructor in Modern Languages*. A.B., Hampden-Sydney College; M.A., University of Pennsylvania.
- ROBERT E. WELSH (1968, 1963), *Professor of Physics*. B.S., Georgetown University; Ph.D., The Pennsylvania State University.
- MILDRED BARRETT WEST (1968, 1959), *Associate Professor of Physical Education for Women*. B.S., Georgia State College for Women; M.A., University of Maryland.
- JAMES P. WHYTE, JR. (1958, 1958), *Professor of Law*. A.B., Bucknell University; M.A., Syracuse University; J.D., University of Colorado.
- STANLEY B. WILLIAMS (1948, 1948), *Professor of Psychology*. A.B. and M.A., University of California, Los Angeles; Ph.D., Yale University.
- RICHARD A. WILLIAMSON (1970, 1970), *Assistant Professor of Law*. B.B.A., Ohio University; J.D., College of Law, The Ohio State University.
- JOHN H. WILLIS, JR. (1967, 1959), *Associate Professor of English*. A.B., University of Virginia; M.A. and Ph.D., Columbia University.
- ROLF G. WINTER (1964, 1964), *Professor of Physics*. B.S., M.S. and D.Sc., Carnegie Institute of Technology.
- FRANK J. WOJCIK (1965, 1965), *Instructor in Marine Science*. B.S., University of Massachusetts; M.S., University of Alaska.
- J. L. WOOD (1961, 1959), *Professor of Marine Science*. B.S., Massachusetts State College; M.S., University of Massachusetts; Ph.D., Columbia University.
- BURTON M. WOODWARD (1969, 1969), *Associate Professor of Business Administration*. AB., M.B.A., and Ph.D., University of Florida.

CECIL W. WOOTEN (1969, 1969), *Visiting Instructor in Classical Studies*. A.B., Davidson College; M.A., University of North Carolina, Chapel Hill.

YING-YEUNG YAM (1967, 1967), *Assistant Professor of Physics*. B.S., Trinity College, Connecticut; M.A., University of California, Berkeley; Ph.D., University of Pennsylvania.

JOSEPH R. ZEPKIN (1968, 1968), *Lecturer in Law*. A.B. and B.C.L., College of William and Mary.

WALTER S. ZIMMERMAN (1966, 1966), *Associate Professor of Modern Languages*. B.S. and Ph.D., New York University.

PAUL LEON ZUBKOFF (1970, 1970), *Associate Professor of Marine Science*. B.S., University of Buffalo; M.S., George Washington University; Ph.D., Cornell University.

DAVID E. ZWERNER (1968, 1968), *Instructor in Marine Science*. B.S., George Washington University; M.A., College of William and Mary.

Earl Gregg Swem Library Staff

WILLIAM CARTER POLLARD (1966, 1966), *Librarian*. B.A., University of North Carolina; M.A., Florida State University.

KATHRYN JOAN BLUE (1968, 1968) *Assistant Cataloging Librarian*. B.A., Cornell College; M.A., University of Wisconsin.

HELEN PILKINGTON BRYHN (1949, 1947), *Documents Librarian*. A.B., College of William and Mary.

MARY LOUISE BROWN COBB (1970, 1967), *Cataloging Librarian*. B.A., Wake Forest College; M.L.S., George Peabody College for Teachers.

MARGARET CELESTE COOK (1966, 1966), *Curator of Manuscripts*. B.A., Sweet Briar College; M.A., College of William and Mary.

SUZANNE LOUISE FOLEY (1967, 1965), *Reference Librarian*. A.B., College of William and Mary; M.L.S., Rutgers University.

HERBERT LAWRENCE GANTER (1950, 1940, 1948), *College Archivist*. A.B. and B.C.L., College of William and Mary.

SARAH VIRGINIA GRAY (1964, 1964), *Periodicals Librarian*. A.B., Duke University; M.S. in L.S., University of North Carolina.

- HENRY DALE GRUNDER (1967, 1967), *Curator of the Virginia Collection and of Rare Books*. B.A. and M.A., Miami University; A.M., University of Chicago.
- JULIE EVANS PREISSER (1970, 1970), *Assistant Reference Librarian*. B.A., Stanford University; M.S.L.S., University of Michigan.
- SUSAN R. STEVICK (1969, 1969) *Assistant Cataloging Librarian*. A.B., Vassar College; M.S., Columbia University.
- CAROL DIANE TERRY (1970, 1969), *Circulation Librarian*. B.A., Gettysburg College; M.S., University of North Carolina.
- MARY LYNWOOD THAXTON (1967, 1967), *Assistant Reference Librarian*. B.A., Emory and Henry College; M.Ln., Emory University.
- SUE WALLENIS WELCH (1970, 1970), *Assistant Cataloging Librarian*. B.A., Wilson College; M.L.S., Drexel University.
- NOLAN THOMAS YELICH (1968, 1968), *Head, Public Services*. B.S., Wisconsin State University, Oshkosh; M.S., University of Wisconsin.
- AILENE ANNE ZIRKLE (1964, 1963), *Acquisitions Librarian*. A.B., Madison College; M.L.S., George Peabody College for Teachers.

Health Service Staff

ROBERT E. DEBORD, M.D.	<i>Director of Student Health Service</i>
JOSEPH D. BROWN III, M.D.	<i>College Physician</i>
SUE M. HARTSFIELD, R.N.	<i>Head Nurse</i>
MRS. CHARLES CHANDLER, R.N.	<i>Nurse</i>
MRS. G. V. BRACEY, R.N.	<i>Nurse</i>
MRS. GORDON GRAY, R.N.	<i>Nurse</i>
MRS. WILLIAM DAYTON, R.N.	<i>Nurse</i>
MRS. J. A. EDMUNDS, R.N.	<i>Nurse</i>

General College Committees

- Administrative Council:* LOWANCE (Chairman), R. BROOKS, ENGLISH, FOWLER, HARGIS, HEEMANN (Secretary), HERRMANN, W. M. JONES, KELLY, LAMBERT, QUITMEYER, SCHONE, WHYTE, WILLIS, PRESIDENT PASCHALL (ex officio).
- Admissions:* GARRETT (Chairman), BAXTER, BICK, CLEM, M. FREEMAN, FUCHS, KING, RUBLEIN, WELSH, HUNT (ex officio).

Arts and Lectures: GREEN, T. HEARN (Co-chairmen), BEYER, COLEMAN, COYNER, DOLMETSCH, A. Z. FREEMAN, LAVACH, SHERMAN.

Athletics: JOHNSTON (Chairman), BARNES, CATO, DERKS, N. ELLIOTT, LINKENAUER, ROSEBERG, SANCETTA, SYKES, TILLOTSON, WHYTE, HOOKER (ex officio).

Computer Center Advisory: FUNSTEN (Chairman), CHAMBERS, FISCHER, GALFO, GARRETT, HUMPHREY, JENSEN, KIEFER, NORCROSS, QUINN, TERMAN, WHITAKER, SOUTHWORTH (ex officio).

Discipline: WHYTE (Chairman), B. DONALDSON (non-voting), EDWARDS, FLANAGAN, J. W. JONES, PROSL, QUINN, SADLER (non-voting), THOMPSON.

Environment: VERMEULEN (Chairman), ALTSHULER, HUMPHREY, KIEFER, VON BAEYER, WILLIS.

Faculty Research: R. M. BROWN (Chairman), BULLOCK, CONLEE, KORNWOLF, LEADBEATER, PHELPS, E. RHYNE, SCHIAVELLI, SHEAN, SOUTHWORTH, TRAYWICK, HEEMANN AND SCHONE (ex officio).

Graduate Council: W. M. JONES (Chairman), BROOKS, EVANS, HARGIS, HERRMANN, POLLARD, QUITTMAYER, SCHONE, SELBY, WHYTE.

Prizes and Special Awards: MACDONALD, General Chairman.

Botetourt Medal: B. DONALDSON, KALLOS, LAMBERT, WILLIAMS.

Carr Cup: ARMSTRONG, BARNES, EVANS (also two additional members, one each to be named by Senior and Junior classes).

Sullivan Award: R. BROOKS, W. A. ELLIOTT (Asst. Dean of Students), FISCHER, MOSELEY, C. McCULLEY, QUITTMAYER, SCAMMON.

Scheduling: WILLIS (Chairman), LAMBERT (Secretary and Keeper of the College Calendar), J. DONALDSON, ENGLISH, HERRMANN, KELLY, SCAMMON, H. SMITH, THORNE, HOOKER (ex officio).

Special Events: EVANS (Chief Marshal), ARMSTRONG, BALDWIN, BALL, DERKS, HOFFMANN, KERNODLE, PHELPS, SELBY.

Fall Convocation: BALL (Chairman).

Charter Day Convocation: SADLER, WILLIS (Co-chairmen)

Spring Honors Convocation: LAMBERT (Chairman)

Commencement: LAMBERT (Chairman)

Homecoming, Burgesses' Day: KELLY (Executive Secretary of Alumni)

Student Aid and Placement: HEEMANN (Chairman), BRIGHT (Secretary), S. BROWN, CHESSEY, CLEMENT, KERNODLE, REYNOLDS, STANLEY, HUNT (ex officio).

Student Recreation: GREEN (Chairman), E. JONES, MOSELEY, SADLER, VARNER, WEST, ENGLISH (ex officio).

Committees of the Faculty of Arts and Sciences

Academic Status: NEWMAN (Chairman), BARNES, CATO, DAVIDSON, B. DONALDSON, JENSEN, G. JOHNSON, R. JOHNSTON, SADLER, STRONG, VANFOSSEN.

Athletics (Women): WEST (Chairman), ARCHER, ROBY, TOMLINSON. MARGARET WALSH, CYNTHIA WEIBOLDT (students).

**Curriculum:* L. SMITH (Chairman), E. BAUER, BECKHOUSE, COKE, A. FREEMAN, G. JOHNSON, D. JONES, LEADBEATER, J. McKNIGHT.

†*Degrees:* FOWLER (Chairman), CALLARD, FRIEDMAN, MACCUBBIN, R. B. SHERMAN.

†*Faculty Affairs:* FOWLER (Chairman), FEHRENBACH, HAMILTON, LIVINGSTON, McKENNA, NEWMAN, TERMAN.

Foreign Studies: DIDUK (Chairman), DOLMETSCH, C. KIM, LAVIN, MacDonald, WILLIS. MADELEINE CARNEY, PAUL SUPAN (students).

Graduate Studies: SCHONE (Chairman), EVANS, HARGIS, MATHES, MOORE, RHYNE, ROHERTY, SANWAL, SELBY, SHER, TYREE, S. WILLIAMS, FOWLER (ex officio).

Honors: FOWLER (Chairman), VON BAEYER, CALLARD, GRAYSON, LIVINGSTON, NETTELS, THEMO, BEYER (ex officio). ANITA COLES, KENNETH KING (students).

**Honorary Degrees:* BEYER (Chairman), BALLINGALL, SELBY.

*Elected by the Faculty.

†Elected by the Faculty, except the Chairman, who is the Dean of Faculty of Arts and Sciences.

Library: McCORD (Chairman), BARRY, FEHRENBACH, HOLMES, LEADBEATER, MANGUM, ROHERTY, THOMPSON, POLLARD AND SCHONE (ex officio). ELLIS JOHNSON, MARGARET MARTIN (students).

National Scholarships & Foreign Exchange Scholarships: BEYER (General Chairman).

Committee A: C. McCULLEY (Chairman), BEYER, FOWLER, HAMILTON, W. M. JONES, LAMBERT, PROSL, WILLIS.

Committee B: G. SMITH, EVANS, MOORE.

**Nominating:* HARCUM (Chairman), W. F. DAVIS, ITO, KIEFER, NETTELS, SCHIFRIN.

Psychological Counseling Center Advisory Council: JOHNSTON (Chairman), ALTSHULER, J. D. BROWN, M. FREEMAN, LAMBERT, J. SMITH, S. WILLIAMS, CHAMBERS (ex officio).

Committees of Schools

The individual schools of the College have various committees either elected by the faculty of the school or appointed by the Dean. These committees include: Curriculum Committee, Advisory Committee, Graduate Studies Committee, Library Committee, Scholarship Committee, Special Events Committee, Admissions Committee, and Degrees Committee.

*Elected by the Faculty.

COLLEGE CAMPUS AND BUILDINGS

THE COLLEGE CAMPUS, comprising approximately 1,200 acres of land, extends from the western edge of the restored area of Colonial Williamsburg to picturesque Lake Matoaka and an extensive stretch of beautifully wooded land known as the College Woods. Within its boundaries are three sections known as the *Old Campus*, *The Main Campus*, and *The New Campus*.

In the front of a triangle formed by Jamestown and Richmond Roads, and facing the Duke of Gloucester Street, lies the elm-shaded *Old Campus* with its three original buildings. *The Sir Christopher Wren Building* (1695 restored 1928-31) has persisted despite damage by fires in 1705, 1859, and 1862. Its Great Hall contains portraits of Queen Anne (Kneller school) and other seventeenth and eighteenth century figures. The Chapel crypt contains, among others, the graves of Lord Botetourt, three Randolphs and Bishop James Madison. Still in daily classroom use, it is the oldest academic building in the United States and designated a National Historic Landmark by the Department of the Interior. *The Brafferton* (1723 restored 1932) was erected and maintained as an Indian School until the Revolution by income derived from Brafferton Manor, Yorkshire, England, purchased by the executors of Robert Boyle, the noted English Physicist, to carry out his bequest to promote Christianizing the Indians. At present it houses several administrative offices of the College. *The President's House* (1732 restored 1931) has served as a home for each of the twenty-three presidents of the College. It was damaged by fire in 1781, while occupied as a hospital by French Army officers after Yorktown. King Louis XVI later contributed to its repair. These three pre-revolutionary masterpieces were restored through the generosity of John D. Rockefeller, Jr.

Behind the Wren Building, extending to the College Woods and flanking the Old Campus is the *Main Campus*. Through its center runs a wide sunken garden, lined on two sides by a boxwood hedge. On the north side of the sunken garden is the Old Library (1908, 1923, 1929), originally constructed with Carnegie Foundation aid. The Old Library now houses the Marshall-Wythe School of Law, its library and related academic and public affairs activities. West of the Old Library is *Rogers Hall* (1927), named for William Barton Rogers, student (1819-21), professor of natural philosophy and chemistry (1828-35), and founder and first president of Massachusetts Institute of Technology (1861-70). It contains classrooms and labora-

tories for chemistry and other studies. West of Rogers Hall is *James Blair Hall*. It is used for both administrative offices and classrooms.

On the east end, south side, of the sunken garden is *Ewell Hall* (1926 rebuilt 1958). Originally built by Phi Beta Kappa, it burned in 1953, and when rebuilt was named in honor of Benjamin Stoddert Ewell, fifteenth President of the College. It now houses the offices of the College President and Dean of Admissions as well as providing space for classrooms. West of Ewell Hall is *Washington Hall* (1928), named for the first President of the United States who also served as Chancellor of the College (1788-99), which is devoted to general classroom use. Farther west of the sunken garden, on the edge of the College Woods, are eleven lodges presently being used for classrooms and faculty offices.

On the northern edge of the Main Campus, north of Richmond Road, is *Brown Hall* (1926), a women's dormitory. It is named for the home of Dudley Digges, Revolutionary patriot whose home stood on its site. Close by are nine college-owned residences occupied by sororities. In a westerly direction, south of Richmond Road, is *Blow Gymnasium* (1924 enlarged 1941), given by Mrs. George Preston Blow and family in memory of George Preston Blow, Captain, USN. His father, George Blow II, attended the college (1829-31), as did his grandfather, Col. William Blow (1804). It is used for men's physical education and R.O.T.C. To the southeast of Blow Gymnasium is *Monroe Hall* (1924), a men's dormitory, named for the fifth President of the United States and student at William and Mary (1774-76). Southwest of Blow Gymnasium is *Old Dominion Hall* (1927), a men's residence, named in honor of Virginians who played a prominent part in the making of the country. *Bryan Hall* (1953), north of Old Dominion, a men's dormitory, and was named for John Stewart Bryan, twentieth President of William and Mary (1934-42) and Chancellor of the College (1942-44). Adjacent to Bryan, and forming a complex of dormitories are *Dawson* (1953), named for the second and fourth College presidents, William (1743-52) and Thomas (1755-60); *Stith* (1953), named for the third President of the College, William Stith (1752-55); *Camm* (1959), named for the seventh College President, John Camm (1771-77); and *Madison* (1959), named for the eighth College President, James Madison (1777-1812). West of Bryan complex is *Cary Field Park* (1935), consisting of a 15,000 seat stadium surrounded by men's athletic fields and parking areas. It was named for T. Archibald Cary, member of the College's Board of Visitors (1901-06), who gave funds for the first athletic field (1910) where Old Dominion and Bryan Halls now stand.

On the southern side of the Campus, south of Jamestown Road, is *Tyler Hall* (1916 renovated 1951), a men's residence, named for John Tyler, alumnus of the College (1806), and tenth President of the United States (1841-45). South of Tyler Hall is the *King Infirmary* (1930), named for Dr. David J. King, College physician (1919-34). This building is also used as a men's dormitory. The *Campus Center* (1960) is directly west of Tyler Hall and is the meeting place on Campus. It provides offices for student activities and publications and contains recreation rooms, a theater, and meeting and dining rooms in addition to "The Wigwam" which features a grill for light dining. West of the Campus Center is *Trinkle Hall* (1926), the main dining hall named in honor of E. Lee Trinkle, Governor of Virginia (1922-26), who was instrumental in restoring this building promptly after a fire had destroyed an earlier dining hall on the same site. South of Trinkle Hall are located the *College Laundry* and *Power Plant*. Directly west is *Taliaferro Hall* (1935), named for William Booth Taliaferro, alumnus of the College (1842), who was active in the reopening of the College in 1888 and a member of its Board of Visitors (1870-98). This serves both as a men's dormitory and as a center for the general honors program.

Farther west, on the north side of Jamestown Road, are four residence halls for women. *Jefferson Hall* (1920) is named for Thomas Jefferson, student at the College (1760-62), reorganizer of the College curriculum (1779), member of the Board of Visitors (1779), and third President of the United States (1801-09). West of Jefferson is *Barrett Hall* (1927), named for Kate Waller Barrett, M.D., prominent Virginia civic leader, advocate of higher education for women and member of the Board of Visitors (1921-25). *Chandler Hall* (1931) is west of Barrett and is named for Julian Alvin Carroll Chandler, alumnus (1891), and President of the College (1919-34). *Landrum Hall* (1958) is still farther west. It is named for Grace Warren Landrum, Dean of Women and Professor of English (1927-47).

On the extreme southwest edge of the Main Campus is the newly developing Campus. Here, facing Jamestown Road, is *Phi Beta Kappa Memorial Hall* (1957) which contains an 805-seat theater, dressing rooms, scene building shops, classrooms, offices, a conference center and television and radio broadcasting facilities. A Fine Arts Wing, *Robert Andrews Hall*, to house the Fine Arts Department has recently been added to Phi Beta Kappa. Adjacent to Phi Beta Kappa are women's playing fields. North of Phi Beta Kappa is the *Earl Gregg Swem Library* named for the College Librarian (1920-1945). Here are housed over a half a million books and documents, the Lord Botetourt Art Gallery, the William and Mary Museum, the Institute

of Early American History and Culture and an auditorium and seminar rooms. Northeast of the Library is the recently completed *Millington Hall of Life Sciences* named for John Millington, Professor of Natural Philosophy (1836-1848) housing the Departments of Biology and Psychology. Northwest of Phi Beta Kappa is the *William Small Physical Laboratory* (1964) named for William Small, Professor of Natural Philosophy (1758-64). Here are to be found modern and elaborate classrooms, laboratories and equipment for teaching and research in physics. West of Phi Beta Kappa Hall is Hugh Jones Hall which houses the Computer Center and the mathematics department and serves as the temporary location of the School of Business Administration and other departments. It is named for a distinguished professor of mathematics. Farther to the northwest is *Adair Gymnasium* for women (1963), named for Cornelia Storrs Adair, student (1921-23), and distinguished Virginia educational leader. Beyond Adair Gymnasium in the same direction is *Jessie Ball duPont Hall* (1964) bearing the name of a gracious benefactor of the College. Directly north of the Swem Library is *Yates Hall* (1962), a men's residence hall, named for the Rev. William Yates, fifth president of the College (1761-64). Across the campus road, to the west of Yates dormitory, is the *Commons* (1967), a new dining hall. North of the Commons is the newly completed *William and Mary Hall*, a men's physical education-convocation building (1970), containing a gymnasium-auditorium seating 10,000, various sports rooms, an auxiliary gym, a medical suite, offices and classrooms. This multi-purpose building will be used for all large gatherings, such as convocations, and will also provide facilities for physical education, intercollegiate sports, and intramural programs. North of Yates dormitory and The Commons is located the new men's dormitory, *Fraternity Circle* (1967). This dormitory consists of twelve units, each occupied by a fraternity.

Far to the west of Phi Beta Kappa and on the shores of Lake Matoaka is the *Lake Matoaka Drama Amphitheatre* (1947), scene for annual outdoor summer historical dramas.

The Library

The Swem Library as of July 1st, 1970, contained 450,000 catalogued volumes. The books are classified according to the Dewey Decimal System and the Library of Congress classification with variation in special classes. Additional resources of the Library include government documents, books and pamphlets in special collections, and several thousand volumes in microform. The number of periodicals

and newspapers regularly received is 2,800. The Library holdings of the College also include more than 750,000 manuscripts, prints, maps, musical records, and newspapers dated before 1900.

With the exception of rare books and materials in the special collections, the volumes in the Library are on open shelves and easily accessible to all students and members of the faculty. Students are privileged to go freely into the stacks and reading areas to select the books they need and to browse at leisure.

The library, named in honor of the late Dr. Earl Gregg Swem (Librarian, 1920-1945; Librarian Emeritus, 1945-1965), was opened to the public early in 1966. It contains a variety of educational facilities designed to assist the most inexperienced freshman or the most distinguished national scholar. The Reference Department on the main floor contains the card catalogue, periodical indexes, and other reference sources. The upper two floors consist of a coordinated book stack—reading area designed to accommodate the study and research needs of all users of the building. Special attention has been given to proper lighting and acoustical treatment of all areas.

The Earl Gregg Swem Library is open to the public Monday through Friday: 8:00 a.m. to midnight; Saturday: 8:00 a.m. to 5:00 p.m.; Sunday: 2:00 p.m. to midnight.

A student is privileged to borrow as many books at one time as he requires. The privilege of borrowing books is also extended to adult residents of Williamsburg and the adjoining counties, to military personnel stationed on the peninsula, to the members of the staff of Colonial National Historical Park at Jamestown and Yorktown, and to the staff of Colonial Williamsburg, Incorporated. Photocopy facilities are available at a modest cost to all users of the Library.

A check-out system has been instituted at the main entrance of the library to make certain that materials taken from the building are properly charged.

The Reserve Book Collection is located on the first floor of the Earl Gregg Swem Library. This department contains about 3,000 volumes which are changed each semester as the courses require. There are other departmental libraries in special rooms which are open at special hours: the Chemistry Library in Rogers Hall, the Physics Library in the William Small Physical Laboratory, the Geology Library in Bryan Hall, and the Mathematics Library in Jones Hall.

The Special Collections Division on the ground floor of the Earl Gregg Swem Library—including the Botetourt Art Gallery, Museum, College Archives, Rare Book Room, Virginia Room, Tucker-Cole-

man Room, and Manuscripts Department—provides full security and convenient access to the rare books, historical papers, and early Virginia records preserved within these departments. The College of William and Mary archives and collections of historic manuscripts touch Virginia life of four centuries. Worthy of special mention are representative letters of such distinguished Virginians as George Washington, John Marshall, St. George Tucker, Thomas Jefferson, James Monroe, John Tyler, James Madison, George Mason, William B. Taliaferro, and Joseph E. Johnston. The papers of three contemporary political figures are a part of the manuscript collection: Governor William M. Tuck, Governor John Garland Pollard and U. S. Senator Willis Robertson. Among the special collections in the Rare Book Department are those touching many aspects of early American history, the James Branch Cabell collection, the Hetty Cary Harrison collection on eighteenth century gardening and horticulture, the Peter Chapin collection of books on dogs and hunting, the Ralph Green collection of books, notes, and printing equipment relating to the development of the art of printing in the United States, and the collection of classical writings presented by the late Dr. Earl Gregg Swem.

The Tucker-Coleman Room houses one of the few colonial libraries left intact in this country. The collection contains 400 books with St. George Tucker's signature and 800 volumes belonging to his sons and descendants. The manuscript portion of the collection consists of over 30,000 pieces relating to St. George Tucker, his contemporaries, and his descendants.

The figurehead of the Special Collections Division of the Swem Library is the original statue of Norborne Berkeley, Baron de Botetourt, Colonial Governor of Virginia, 1768-1770, and rector of the College Board of Visitors. One of the oldest surviving examples of colonial statuary in America, the Botetourt statue was originally acquired by the College in 1801 and until 1958 stood in the college yard in front of the historic Sir Christopher Wren Building.

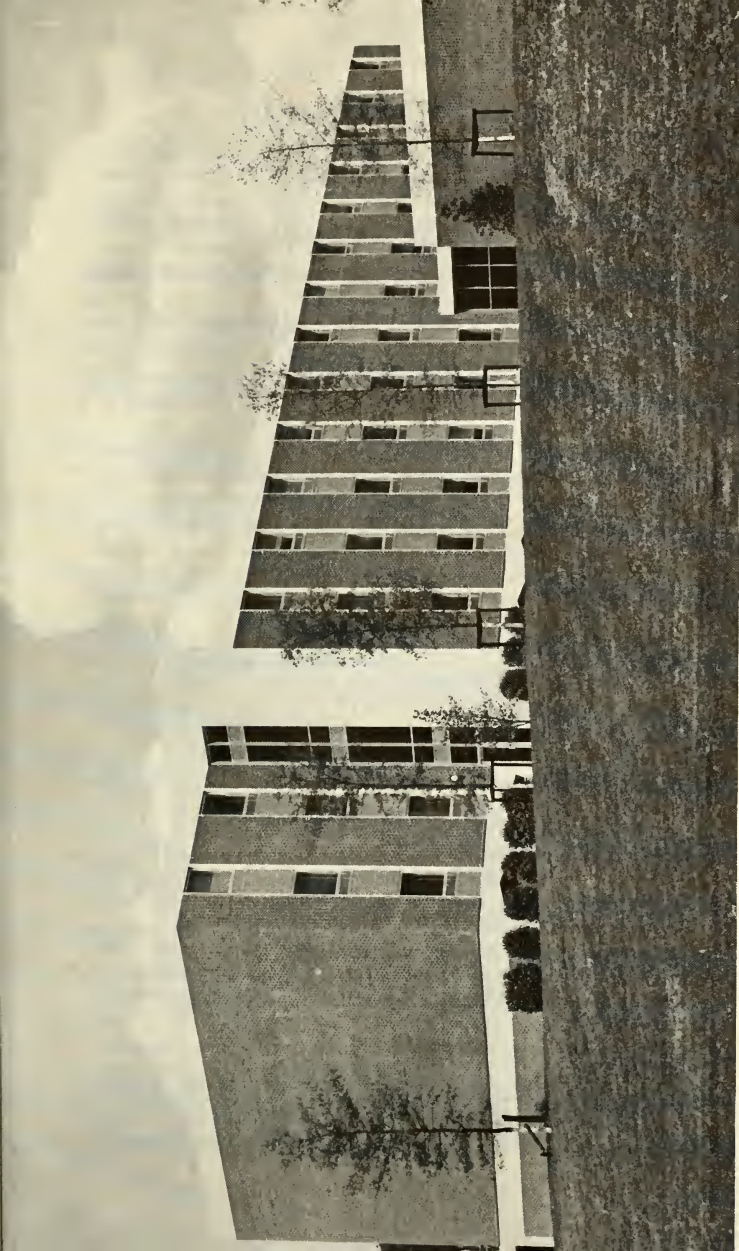
The Computer Center

The Computer Center is housed on the ground floor of Hugh Jones Hall. Equipment includes an IBM System/360 Model 50 computer with 524,288 bytes of high speed storage, an IBM 2314 disk system, magnetic tape units, a Calcomp plotter, and interactive terminals.

The facilities of the Center are used in undergraduate and graduate instruction and research. In addition to several regularly scheduled courses in programming and numerical analysis, short non-credit

courses are given in Fortran, PL/I, and APL. A staff of experienced programmers is on hand to assist faculty and graduate students.

The Center also serves as the Regional Center for the eastern part of Virginia, under the statewide plan for educational data processing developed by the State Council of Higher Education for Virginia. At present, nine other colleges and state agencies, as well as a number of secondary schools, are included in the computer network.



The William Small Physical Laboratory

II. STUDENT AFFAIRS

STUDENT LIFE

GENERAL STATEMENT

WHILE wishing to keep to a minimum the number of narrowly defined regulations and thereby to encourage a sense of responsibility on the part of each student and a general atmosphere of freedom on the campus, the College believes that it has an obligation to require that degree of order and satisfactory conduct which will permit the fulfillment of the educational purposes with which it is charged by law.

Regulations governing conduct and student life, therefore, have been promulgated and published in the Student Handbook, copies of which are made available to all applicants for admission to the College and which are incorporated by reference as an integral part of this catalogue.

RESIDENCE

All undergraduate students must live in the College residence halls, except that (1) all students twenty-one years old and over, and seniors under twenty-one having parental approval, are permitted to live off campus at a place of their choice and (2) students who commute daily from their homes are not required to live in the residence halls.

All resident undergraduate students who are classified as freshmen or sophomores, unless they have attended college for four semesters, are required to board in the College dining halls. For all other students boarding in the dining halls is optional.

By the current regulations governing residence halls, students may not receive or visit persons of the opposite sex in residential rooms except during stated hours at approved open houses, and women residents are required to abide by stated curfew hours and regulations regarding absences from their residence halls.

The Women's Dormitory Association establishes and enforces regulations governing conduct in the women's residence halls.

Public Performances and Parties

No person or group of persons associated with the College of William and Mary shall give either in Williamsburg or elsewhere as

a representative of the College a public performance of any kind unless prior to the first rehearsal the said person or group of persons shall have obtained from the office of the Vice-President for Student Affairs permission to present the entertainment. In order to secure permission, those in charge of the performance must make written application to the Vice President for Student Affairs.

AUTOMOBILE REGULATIONS

By regulation of the Board of Visitors, only students who have completed the equivalent of four semesters as full time students shall be permitted to maintain automobiles on campus. This regulation does not apply to graduate or day students commuting from home, or students age 21 or over. Those students who do not qualify under the requirements stated above are not allowed to have automobiles on campus or in Williamsburg except for essential employment, physical disability or for other essential college related needs. This special permission is to be secured from the President through the office of the Dean of Men. A student who brings an automobile to the campus without prior written approval, in anticipation of obtaining special permission, is in violation of this regulation. Violators of the automobile regulation will be referred to the appropriate Dean or the Discipline Committee for disciplinary action. The penalty for a first offense will normally be not less than disciplinary probation nor greater than suspension for one semester.

College regulations require that all motor vehicles operated on the campus, including motor scooters, be registered by the third day of classes.

A detailed statement of the College policy and regulations pertaining to the use of motor vehicles is available at the Office of the Dean of Men.

EXTRACURRICULAR ACTIVITIES

There are several broad areas of student life and activities outside the formal academic program which, together with that program, comprise the whole educational experience of a student at the College of William and Mary. These general areas are the cultural, the social, the spiritual, and the athletic, ranging in specific activities from student government, publications, theatre, and musical groups, to participation in intercollegiate and intramural athletics. The College recognizes and encourages these many activities as valuable elements in the student's life. As a result, the student is able to partici-

pate in an unusually varied number of activities as his time, talents, and interests dispose him. He has the possibility for a rich and meaningful life to be coupled with that of the demanding, yet exciting, experiences of classroom and laboratory.

Since William and Mary is chiefly a resident college, students and faculty compose a closely knit community in which extracurricular and social activities play a considerable role in the cultural and intellectual development of the individual. An informal relationship between teacher and student is encouraged, both in and out of the classroom, thereby fostering the process of living and learning together. The College is concerned to keep classes small, and to ensure the possibilities of both a friendly, informal faculty-student association, and a rewarding, non-academic life whereby the individual's needs, interests, and identity are honored in a democratic way. The College believes that one of the major purposes is to inculcate by means of the several phases of college life the ideals of self-responsibility and good campus citizenship.

The new student at William and Mary is introduced to the College life and atmosphere during the orientation period which takes place immediately before the beginning of classes in September. During this period, the Honor System is explained to the entering student, and he is made familiar with the College facilities, and the complete range of extracurricular activities. He is also introduced to student leaders, and to key members of the administrative staff who will assist him through their experience and human understanding. Perhaps most important of all, the entering student will meet in personal consultation his faculty adviser who will work closely with him before registration and occasionally during the school year to assist him to engage successfully in an academic program suitable to him.

The new student thus becomes an integral part of William and Mary, making new friends among members of his own and other college classes, among the faculty, and administrative officers.

Community life is important at William and Mary, since the majority of students live in residence halls. The twelve fraternities and the nine sororities provide housing for part of their membership. While these organizations make prominent contributions to the life of the College, an adequate social life is available to non-members in many functions and activities sponsored at the College. The use of leisure is provided for in the Residence Halls by recreation rooms, study rooms, and lounges, which are appropriately furnished. As the meeting place of students on the campus, the Campus Center offers an educational and recreational program of events for the College

family as well as opportunities for student participation in the presentation of that program. The facilities of the Center include lounges for informal gatherings, a television room, music listening rooms with high fidelity equipment, a reading room, and a cafeteria and refreshment bar, called "The Wigwam." Billiards, table-tennis, and shuffleboard comprise the games activity. In addition, there are meeting rooms to house various interest groups and clubs, as well as a ballroom for dancing. The offices of the various student publications and Student Government are located in the Center. A film series, a lecture series, art and craft exhibits, and concerts are presented as a part of the regular Center program.

Informal College dances take place occasionally on Saturday nights throughout the session, and formal dances are held at intervals. In addition, dances and other social functions are held by fraternities, sororities, dormitories and other organizations.

The Honor System

Of primary importance to the life of the students is the College's student administered plan of discipline known as the Honor System. The Honor System is concerned with individual responsibility in all matters involving the student's honor, and the System assumes that every student is concerned with the strict observance of the principles of honorable conduct which he upon matriculation pledges to uphold, for his own sake, for the sake of his fellow students, and for the College. Administered through elected councils of student members, the Honor System applies to the specific areas of lying, stealing, and cheating.

Student Government

The constitution of the Student Association of the College of William and Mary provides for an Executive Council and Senate whose powers extend to all student activities common to both men and women. A separate organization, the Women's Dormitory Association, deals with the dormitory activities and regulations which concern the women solely. Similarly, each men's residence hall elects a Dormitory Council from among its students.

The Board of Student Affairs

The Board of Student Affairs was established by action of the Board of Visitors for the 1968-69 academic session. It has replaced and assumed the functions of the previously existing Student Activi-

ties Fee Committee, the General Cooperative Committee, and the Publications Committee. In addition, the Board will serve as a forum for the exchange of views and the formulation of recommendations for policy changes on matters pertinent to the College and student life in particular.

The Board is composed of members of the student body, the faculty, and the administration as follows: the Presidents of the Student Association, the Student Bar Association, the Women's Dormitory Association, and the Honor Councils, the Senior Class, the Junior Class, the Sophomore Class, and the Freshman Class; the Editors of *The Flat Hat*, and *The Colonial Lawyer*; representatives of the School of Law, the School of Education, the School of Business Administration, and three representatives from the Faculty of Arts and Sciences; administration representatives from the offices of the Dean of Students, the Dean of Men, and the Dean of Women; the Vice President for Business Affairs and the Director of the Campus Center. The Chairman of the Board is the Vice President for Student Affairs.

Phi Beta Kappa Society

Alpha of Virginia: The Phi Beta Kappa Society, the oldest Greek-letter fraternity in the United States, was founded by a small group of students at the College of William and Mary on December 5, 1776. During the succeeding four years, the number of members increased to a total of fifty, including Captain John Marshall, who subsequently became Chief Justice of the United States, and Elisha Parmele, a graduate of Harvard University. The faith of these youthful scholars in the permanence and future greatness of their society was shown by their preparation of charters for branches in other colleges. Two such charters were entrusted to Elisha Parmele, who brought about the establishment of chapters at Yale in 1780 and at Harvard in 1781.

The original society at the College became inactive in 1781, with the closing of the College because of the approach of the army of Cornwallis. It was revived in 1851 with the blessings of an aged founder, William Short, and continued until early in the War Between the States. In 1893 the Alpha of Virginia Chapter was revived once again, and it has continued since that time as an active and significant element in the educational program of the College.

At present there are approximately 170 chapters of Phi Beta Kappa located at the leading educational institutions of the United States, with a membership in excess of 120,000. Members of the local chapter number more than 1,000 persons; in addition, a number of faculty members who were elected to Phi Beta Kappa at other institutions

serve actively as affiliated members of Alpha of Virginia. Senior students up to 10 per cent of the total number in the class are elected each year, largely on the basis of scholarship, as members in course. From the alumni of the College of at least ten years' standing who have attained distinction in their professions, Alumni members are elected from time to time. Less frequently, honorary members and faculty members who are not graduates of the College are elected to membership.

Honor Societies and Special Interest Groups

Omicron Delta Kappa is an honorary society whose membership is elected annually from the junior and senior men on the basis of eminence in the fields of scholarship; athletics; social and religious activities; publications; forensic, dramatic, musical, and other cultural activities.

Mortar Board is a woman's honorary society whose members are elected in their junior year on the three-fold basis of service, scholarship, and leadership. It endeavors to serve the College each year by fostering scholarship, by rendering its services whenever requested, and by encouraging a wholesome college atmosphere.

Two national honor societies, *Phi Eta Sigma* for men and *Alpha Lambda Delta* for women, annually select for membership those freshmen who have attained academic distinction.

There are eight honorary societies devoted to furthering interest in special fields of learning. Members of these groups are elected on the basis of scholastic proficiency in the departments concerned. In addition, many students find opportunities for friendly and stimulating associations in the various special interest groups and departmental clubs devoted to such fields of endeavor as literature, philosophy, drama, debating and the several fields of science.

Fraternities

Since the first Greek letter fraternity was founded at William and Mary in 1776, the College has had an unparalleled heritage as a background for its fraternity life. The passage of time, with its accompanying changes in customs, and the opening of the College to women students, has changed and expanded the fraternity sphere of influence. Today the fraternity provides not only a source of good fellowship, but also fills many other needs in the college community.

The fraternities at William and Mary have implied standards of social deportment which are instilled into each fraternity man, and which help to prepare him for his post-college relations with others

in his community. Fraternity intramural athletics allow a much wider participation in competitive sports than can be permitted by varsity competition. A definite criterion of scholarship is established which all men must meet before they are allowed to join any fraternity. Each semester the President of the College awards a cup to the fraternity which has achieved the highest scholastic standing for the preceding semester.

Self-government within the fraternity system is encouraged through the efforts of an Interfraternity Council. There are chapters of twelve social fraternities on the campus: Theta Delta Chi, Sigma Alpha Epsilon, Pi Kappa Alpha, Kappa Alpha, Kappa Sigma, Phi Kappa Tau, Lambda Chi Alpha, Pi Lambda Phi, Sigma Pi, Sigma Nu, Sigma Phi Epsilon and Sigma Chi. An Alumni Interfraternity Council, composed of graduate representatives of the several fraternities, acts in an advisory capacity. This organization makes an annual award to the outstanding fraternity based upon the criteria of scholarship, leadership, varsity athletics, intramurals and community relations.

Sororities

There are nine chapters of national sororities at the College. In 1921 Chi Omega was founded followed by Kappa Alpha Theta, Kappa Kappa Gamma, Pi Beta Phi, Alpha Chi Omega, Phi Mu, Kappa Delta, Delta Delta Delta, and Gamma Phi Beta. The affairs of the sororities are administered and regulated by a chapter of The National Pan Hellenic Council.

Each sorority carries out its respective national principles in the general realms of social congeniality, moral and mental standards, development of leadership, cooperation and service, and in stimulating interest in vocations as an outlet for creative abilities. Each sorority has local as well as national philanthropies to which it contributes. Each semester the President of the College awards a cup to the sorority which has achieved the highest scholastic standing for the preceding semester.

The sorority houses, owned by the College, each accommodate between 15 and 20 women, usually juniors and seniors, under the College status of a "small residence hall."

Publications

The *Flat Hat* is a weekly paper published and edited by the students. It is a chronicle of student life and daily affairs of the College.

The *William and Mary Review*, published at least twice a year by a body of student editors, is the College literary publication. It contains short stories, essays, poems, and reviews. Contributions are welcome from all members of the student body.

The *Colonial Echo* is published annually by a staff comprised entirely of students. This well-illustrated volume is a treasury of current campus life.

The financial administration of all student publications is supervised by the Board of Student Affairs. The selection of the major editorial and managerial positions of the publications is also under the jurisdiction of the Board of Student Affairs.

The William and Mary Theatre

Now in its forty-fourth year, the William and Mary Theatre is a significant contribution to students as members of the audience or as the participants. The staff is composed of five professionally trained members of the faculty of Theatre and Speech. Participation in all forms of dramatic work is provided to students through courses in the Department of Theatre and Speech and through extra-curricular activity. Tryouts for parts in plays are open to all students, and casting is based on a competitive process with the intent to assemble the best qualified people for public performances. The production crews are basically composed of members of the classes in stagecraft, lighting, and design and costume, but emphasis is also placed on the opportunity for all students to volunteer to serve on committees of set construction, painting, sewing, making of properties, publicity, ushering, and box office management. Every production is a learning process for everyone participating.

Annually four full-length plays are presented in public performances. The plays are carefully chosen to provide a variety of entertainment, dramatic experience, and cultural value. Among the plays recently produced are: *The Fantasticks*, *the Devil's Disciple*, *The Investigation*, *Hamlet*, *The Unknown Soldier and His Wife*, *Mandragola*, *Of Thee I Sing*, *Phaedra*, *Twelfth Night*, *Dark Mirrors* and *Bright Windows*, *Man of la Mancha*, and *The Rainbow Sign*.

Production methods and styles vary from the proscenium and picture-frame stage to open staging and theatres-in-the-round.

A chapter of a national honorary fraternity is made up of members elected from students who become eligible through successful work in the College theatre.

The William and Mary Debaters

The Intercollegiate Debate Council is an organization training students for participation in college debate tournaments. Any student interested in debate is welcome to join the Council.

Under the guidance of the faculty Director of Forensics and the Department of Theatre and Speech, an extensive program of tournament participation is carried on. Each year debaters from the College enter about thirty debate tournaments. Debaters in recent years have traveled to tournaments at New York University, Dartmouth College, Georgetown University, University of Georgia, Kansas State University, Northwestern University, Illinois State University, and many other eastern colleges.

The College of William and Mary is affiliated with Delta Sigma Rho-Tau Kappa Alpha national honorary forensic fraternity. Outstanding college debaters may qualify for membership.

Locally, the College Debaters endeavor to present programs of interest to the college community. In recent years debaters from England, Ireland and other American universities have appeared before audiences. William and Mary debaters are frequently invited to appear similarly at other universities. William and Mary debaters have frequently hosted high school debaters and are often asked to help judge Virginia High School League debate tournaments. William and Mary is also a member of the Virginia Forensic Association, an organization of Virginia colleges and universities.

The Marshall-Wythe Debate Tournament is in its second decade. This event, held in late January, brings to the campus teams from fifty colleges and universities from all parts of the United States. The tournament is recognized as one of the outstanding meets in the nation, offering both a unique setting and high quality debating. It has been selected as one of twenty qualifying events for the annual Tournament of Champions.

The debate program is coordinated with the Department of Theatre and Speech, making use of course offerings and faculty aid. Its goal is to provide means for honest, intelligent and competitive advocacy. The activity is open to any student interested in the knowledge, skills and pleasures that come from intercollegiate debate.

Lectures, Concerts, and Exhibitions

The cultural life at William and Mary is rich and varied. Under the auspices of the Committee on Arts and Lectures, the College seeks

to provide its students opportunities for enjoying a wide range of public lectures, concerts, and films.

As a charter member of The University Center in Virginia, Inc., the College participates in a cooperative Visiting Scholars Program which annually brings to the campus for public lectures, readings and seminars, a great many distinguished scholars in all fields of learning, renowned authors and artists, and leading figures in public life. Additional public lectures are sponsored by the Committee in cooperation with various departments of the College and the Student Committee on Concerts and Lectures. Prominent guests are also brought to the college by the College-wide Reading Program.

The William and Mary Concert Series annually offers to students, faculty, and area residents, on a voluntary subscription basis, four or five performances by outstanding artists of the professional concert stage. In recent years College audiences have enjoyed performances by Abraham Kaplan and the Camerata Singers; The Orchestra de Paris; Julian Bream, guitarist and lutenist; Raymond Lewenthal, eminent pianist; Pennsylvania Ballet Company; and the Guarneri String Quartet.

Under the sponsorship of the Fine Arts Department, traveling and purchasing exhibits in painting, sculpture, architectural design, theatre and industrial arts are shown throughout each year. The final exhibition annually is devoted to the work of students in the Fine Arts classes. Twice each year the Virginia Museum of Fine Arts presents a showing of original art on the campus by means of an artmobile.

Musical Activities

The College offers many musical opportunities to the student for pleasure, participation, and cultural enrichment. The student may choose to attend a wide variety of performances of unusual interest selected from the William and Mary Concert Series, faculty and student recitals, and the Collegium Musicum Series. Participation in the College Choir, Chorus, Band, Orchestra, and small vocal and instrumental ensembles is possible for interested and qualified students. The Campus Center and College Library provide facilities for record listening. Faculty and students of the Music Department participate in the William and Mary Theatre presentations of musical productions. Each year the men's and women's music fraternities, Phi Mu Alpha Sinfonia and Delta Omicron form an opera company and mount a production of a Gilbert and Sullivan operetta.

The Collegium Musicum Series, sponsored by the Department of Music and open to the College and community without charge, pre-

sents programs of special interest. Included in the season 1970-71 were Anne Koscielny, piano; American Arts Trio; Sergio Luca, violin; Antonio Rodriguez-Baciero, piano; Virginia Raad, lecturer-pianist; Washington Vocal Chamber Music Ensemble.

The William and Mary Choir, a select and mixed group, sings choral literature carefully chosen from among the best available sources. Formal concerts on campus, in the community, and on tour are part of the annual Choir agenda. The William and Mary Chorus, which is a group of women students of the College, provides music for various events on the campus and also appears in formal concerts.

The College Band serves as a dual organization during the academic year. For the football season, the Band performs as a marching unit, and is highlighted in pre-game and half-time shows, pep rallies, and parades, appearing at both home and away games. After the football season, the Band functions as a concert organization, presenting formal and informal concerts on campus and on tour.

The William and Mary College-Community Orchestra is an organization devoted to the study and performance of the best in orchestral music. The organization consists of a Chamber Orchestra, and smaller ensembles made up from the more advanced players of the orchestra. In addition to the annual spring concert the members are active in many special performances in the community.

Private instruction is available for interested and qualified students in piano, organ, voice, strings, and winds. The Music Department sponsors student recitals each year in which advanced students are afforded the opportunity and experience of public performance.

Television and Radio

The College operates a campus-limited, closed-circuit television facility and a non-commercial, FM radio station, WCWM. Radio and Television have a two-fold purpose at William and Mary: the presentation of formal instruction and general information through these media, and curricular instruction of students in the practical application of broadcast principles.

All students are eligible for participation in the activities of WCWM, which is operated by student volunteers on an extracurricular basis. Opportunities are available in all phases of radio programming. Students also serve as crew for closed-circuit television productions through the Work-Study Program.

Religious Life

The College of William and Mary, though a Church of England foundation, has been since 1799 entirely nonsectarian. It avails itself fully of the cordial spirit of pastoral concern which marks the various churches in the small and friendly city of Williamsburg. Many of the students participate in young people's organizations, among which are Balfour-Hillel, the Baptist Student Union, the Canterbury Association, the Channing Forum, the Christian Science Organization, the Lutheran Student Association, the Newman Club, the Wesley Foundation, and the Westminster Fellowship. Representatives of these organizations assist in the College chapel services and sponsor Religion-in-Life events throughout the year.

Men's Athletics

In the George Preston Blow Gymnasium, the men's gymnasium, are two basketball courts, a swimming pool, two handball courts, volleyball courts, showers, lockers, athletic administrative offices, a trophy room, and a social room. Cary Field provides for the following facilities: tennis courts, baseball field, stadium for football, track, and field athletics (seating capacity 15,000), practice fields for varsity and freshmen football, and space for softball and intramural games.

The intramural sports program which is under the direct auspices of the Men's Department of Physical Education is designed to meet the needs and desires of all students as far as it is financially and educationally possible. The program evolves from the expressed desires of the students. The intramural director and other staff members of the Physical Education Department act primarily in organizational and advisory capacities.

Provision is made for participation in the following individual and team activities: badminton, basketball, bowling, free throws, golf, handball, horseshoes, softball, swimming, tennis, touch football, track and field, volleyball, and wrestling. League schedules and individual tournaments are arranged for dormitory, fraternity, and independent competition.

The general supervision of intercollegiate athletics for men has been delegated by the President to a faculty committee. The College is a member of the Southern Conference. H. Lester Hooker, Jr., is the Director of Men's Athletics, and Edmund T. Derringe is the Business Manager.

Varsity intercollegiate teams, under the supervision of a competent staff of coaches who are appointed for the full academic year, are

offered the following sports: baseball, basketball, cross country, fencing, lacrosse, football, golf, gymnastics, soccer, indoor track, swimming, tennis, wrestling and track and field. Freshmen are eligible for varsity competition in all sports except football and basketball.

In addition to the above sports, the College offers National Rifle Association-affiliated Varsity and freshmen rifle teams. All required equipment, including arms and ammunition, is provided by the ROTC Department. Participants are eligible for varsity letters.

Women's Athletics

Sports are conducted and supervised by a joint committee of faculty and students. The program of physical education activities for women provides opportunity for intramural competition, interest groups, and participation in intercollegiate activities in archery, hockey, golf, swimming, fencing, basketball, tennis, and lacrosse.

Provision is made for intramural participation in the following activities: badminton, basketball, bowling, bridge, hockey, softball, swimming, tennis, and volleyball. Schedules are arranged for dormitory, sorority, and individual competition in groups or teams according to the ability of the participant. Tryouts are held each year for membership in Mermettes, the synchronized swimming club, and Orchesis, the dance club.

The Cornelia Storrs Adair Gymnasium provides facilities for fencing, badminton, gymnastics, volleyball, and basketball. The swimming pool and dance studio are located in this building.

The women's athletic fields provide ample space for outdoor activities including archery, golf, hockey, lacrosse, softball and tennis.

STUDENT PERSONNEL SERVICES

HEALTH SERVICE

THE PURPOSE of the Health Service is fourfold: (1) improvement of the health of the students; (2) prevention of diseases; (3) supervision of campus sanitation, which includes inspection of sanitary conditions of cafeterias, dining halls, dormitories, and swimming pools; and (4) instruction of students in matters essential to healthful living.

The Health Service is housed in the David King Infirmary, a modern, fireproof building containing out-patient clinic, dispensary and waiting room, diet kitchen, and eighteen-bed infirmary.

A health certificate is required of all entering students. During each semester, each student is entitled to the use of the Medical Services. The medical services are as follows:

1. Medical care in the Health Service clinic for minor and incipient illness and accidents. Necessary staple drugs and dressings are included.
2. Health consultation service with the medical staff.
3. Special medical examinations for certification of students which is required for participation in intercollegiate athletics and other forms of strenuous activity.
4. Hospitalization in the Health Service infirmary for a limited period, for minor and incipient illness when bed care is advised by the College physician. The College does not, however, assume the cost of special nurses, consulting physicians, surgical operations, X-rays or laboratory tests, care in other hospitals, or special medications. Meals are charged the student at the prevailing dining hall rate.

The College Health Service provides the services listed above, but it lacks facilities for prolonged hospitalization, post-operative care and special diets. Students who require these facilities will be permitted to withdraw from the College for medical reasons without prejudice to their academic records.

BUREAU OF SENIOR AND ALUMNI PLACEMENT

The College maintains a Placement Bureau for seniors and alumni through which nonteaching placements are made. This faculty-sponsored organization helps seniors to obtain employment with busi-

ness and industrial organizations. At the same time it assists business and industry in obtaining a trained body of men and women. The Placement Office also offers its services to the alumni who are seeking job transfers after they have been out of college a number of years. Frequent requests come from industrial and business concerns for men who are available for employment and who have had experience.

Personal records of seniors and alumni are made available to professional, governmental and business organizations interested in employing men and women from the College. The Placement Bureau maintains cordial relationships with many employers and devotes considerable effort each year to placing in permanent positions those students who seek employment. Company representatives are invited to the campus to confer with students and to discuss not only the qualifications necessary for success in their special fields but to explain business opportunities and to make job offers to graduates. In recent times representatives of nationally recognized business concerns have been visiting the campus at the rate of about one hundred per year. These representatives are given every assistance in their recruiting programs. Free services of the Bureau include vocational counsel and personal aid in securing satisfactory positions.

THE CENTER FOR PSYCHOLOGICAL SERVICES

The Center for Psychological Services, located in the basement of Rogers Hall offers professional assistance to students in two areas.

The major function of the Center is to provide personal counseling and help in solving problems of social relationships and the understanding of oneself and others. These services are free of charge, and are provided by experienced clinical psychologists who are members of the faculty. All relationships between clients and counselors are confidential, and at no time do the results of counseling become part of a student's permanent college record. No information concerning an individual's contact with the Center will be released without his written permission.

The second function of the Center is to provide vocational and educational counseling which generally involves aid in the selection of a major course of study or the planning of a career. Psychological services include the administration of vocational and psychological tests, when, in the judgment of the counselor, such instruments can make a meaningful contribution to the understanding or resolution of a student's concerns. In addition to testing that is part of the coun-

seling process, the Center serves as a regional testing center for certain nationally administered examinations. Among these are the Graduate Record Examinations, the Law School Admission Test, the Medical College Admission Test, the Miller Analogies Test, and the Graduate School Foreign Language Test. Application forms and additional information concerning these examinations can be obtained in Rogers 110.

In addition to counseling and testing activities, staff members of the Center for Psychological Services are available for consultation with faculty, administration, dormitory personnel, and students, either individually or in groups. Appointments for individual counseling or for consultation can be made in person or by telephone.

FINANCIAL ASSISTANCE FOR STUDENTS

The Office of Student Aid and Placement administers two types of financial awards to students who matriculate at the College of William and Mary: (a) financial assistance for needy students and (b) scholarships.

Financial assistance for students who must depend upon such aid in order to attend or continue at William and Mary is awarded on the basis of their certifiable financial need. Students receiving such assistance are expected to maintain an overall 1.0 quality point average and obey the rules and regulations of the College. Failure to do so may result in the modification or curtailment of their assistance by action of the College Committee on Scholarships and Student Employment.

Financial assistance for needy students is offered in several forms, including assistance grants, loans, part-time employment, and veterans' benefits. It is the College's practice to attempt to meet the financial requirement of any one of its students by combining possibly two or three of these forms of aid. Thus, after reviewing his case, the Director of Student Aid and Placement may inform a student that he will receive an assistance grant, be recommended for a federally-guaranteed loan, and also be assisted in obtaining part-time employment either on campus or in Williamsburg. More specific information on the various forms of financial assistance available to needy students is given below.

A student who believes he must have financial assistance to attend or continue at the College is required to submit a completed copy of the "Parents Confidential Statement" of the College Scholarship Service. He can usually obtain a copy of this form from his high school guidance counselor or, failing that, by writing directly to one of *The College Scholarship Service's* regional offices in *Princeton, New Jersey; Evanston, Illinois; or Berkeley, California.*

Students who apply to William and Mary under the *Early Decision Plan* should complete and mail their "Parents Confidential Statement" directly to the College Scholarship Service no later than *October 15*. Students who are applying to the College under the *regular admission process* should mail their completed forms to the College Scholarship Service no later than *February 1*. If the appropriate deadline is observed by the student, the Office of Student Aid and Placement will make every effort to inform him of the amount of assistance he can count on at the same time the Admissions Office notifies him of acceptance.

Financial assistance is awarded for one year only, but may be renewed for each succeeding year. In order to renew this assistance for the following year, it is necessary that the holder re-apply to the Director of Student Aid by April 15.

The Office of Student Aid and Placement also administers various scholarship programs. The awards made under these programs are not limited to needy students. They include the Science Contest Scholarship, the Merit Scholarships (sophomores, juniors, or seniors only), the University of Exeter and the University of St. Andrews Scholarships (juniors and seniors only), and the Drapers' Company Scholarship (immediate graduates of the College), and others.

Inquiries concerning the programs described above should be addressed to *The Director, Office of Student Aid and Placement, College of William and Mary, Williamsburg, Virginia 23185*.

Students who enroll in one of the graduate programs of William and Mary may also obtain financial assistance. Information on this matter can be obtained from the Dean of the School or the Chairman of the Department in which a student intends to enroll, or by writing the *Graduate Dean of Arts and Sciences, College of William and Mary, Williamsburg, Virginia 23185*.

A brief description of the major forms of assistance and scholarships is presented below.

Funded Assistance Grants and Scholarships. These awards are made possible through the generosity of friends and alumni of the College. The recipient is neither expected to repay the award, as in the case of a loan, nor expected to perform specific duties, as in the work-study program or when accepting a graduate assistantship.

Scholarships are available to able and deserving men and women residents of Virginia. A limited number of scholarships is also available to out-of-state male residents. A list of benefactors of William and Mary who have established scholarships, assistance grants, loan funds, and prizes is included in this Catalog on pages 324-331.

Unfunded State Scholarships. These are valued up to \$300 each for an academic year. These scholarships are available to Virginia students who meet the qualifications of scholastic achievement, character, and need.

Teacher Training Scholarships. These are available to students who are residents of Virginia and plan to teach in the Virginia public schools. These scholarships are valued at \$350 per academic year. Address all inquiries on this program to *Dean, School of Education, College of William and Mary*.

Educational Opportunity Grants. These grants are awarded to students with exceptional financial need from funds allocated to the College by the U. S. Office of Education. Students may receive between \$200 and \$1,000 for each academic year, depending on the degree of the student's need.

Educational Loans. Several sources of loan funds are available to students with need who attend William and Mary. They include the National Defense Education Act (NDEA) Loan Program, the State Student Loan Fund, several privately-endowed college loan funds, and the Federally Insured State Guaranteed Loan Program. The latter is administered through banks only. These programs vary in terms of who is eligible, how much can be borrowed and in what way the loan must be paid back. One feature of the NDEA Loan Program worth mentioning is that up to 50 per cent of such a loan may be cancelled if its recipient enters the teaching profession.

Student Employment. Many jobs are available to students who wish to earn some portion of their college expenses. These include jobs at the College or with some other local organization. They are funded by State Work-Study Program or Federal Work-Study Program allocations or by the organization hiring part-time student help.

Many fine part-time employment opportunities exist in the vicinity of the campus as a result of the cooperation of Colonial Williamsburg, Inc., and other business concerns. A student can expect to earn from one-fourth to three-fourths of his college expenses through such arrangements.

In order to maintain a proper balance between hours of employment and academic loads, the College requires that all student employment on the campus or in the city be assigned by the Director of Student Aid. Students are cautioned not to undertake more outside work than their academic schedules will safely permit. The normal work load is fifteen hours per week, and no student may work more than twenty hours per week without permission from the Committee on Scholarships and Student Employment.

The usual jobs available to students are those as waiters, clerks, salesmen, technical and manual workers, stenographers, typists, and student assistants at the College. Whenever possible, the Committee on Scholarships and Student Employment will secure for the student a job which is directly related to his intended future career or to his course of study. In every case, an effort is made to give the student a job in which he can display his interests, talents, and skills to the best advantage.

Programs for Federal Beneficiaries. The College participates in all programs which may entitle certain of its students to special federal assistance. These include Veterans' Educational Assistance, Veterans' Children's Educational Assistance, Social Security Benefits for School Children, and others. Persons who are qualified for such programs should work out the details with the appropriate federal agency prior to registration at the College.

FOREIGN EXCHANGE SCHOLARSHIPS

University of Exeter Scholarship and University of St. Andrews Scholarship. The College of William and Mary has an agreement with Exeter University in England and the University of St. Andrews in Scotland for an annual exchange of students. Under the plan an outstanding William and Mary student is given the opportunity to study at one of these universities for one year. One student will be selected for each university. The Exeter scholarship is open to students who are about to enter their junior year or who are members of the graduating class; the St. Andrews is available only to rising Juniors. All college fees (tuition, registrations, room and board) will be waived for the exchange students who will live in one of the Residence Halls of Exeter University or St. Andrews. One student from Exeter and one from St. Andrews will come to the College of William and Mary for the same period.

Drapers' Company Scholarship. Each year two outstanding graduates of William and Mary will be selected by the College for a two-year period of study at Oxford, Cambridge, or another British university. This opportunity is made possible by an agreement between William and Mary and the Drapers' Company of London. In exchange one or two British students will be selected by the Drapers' Company for undergraduate study toward a bachelor's degree at the College of William and Mary. This exchange program will provide the cost of tuition and living expenses for each student.

III. ACADEMIC REGULATIONS AND REQUIREMENTS

ADMISSION TO THE COLLEGE

Within the limits of its facilities as to numbers that can be accommodated, admission to the College of William and Mary is open to all qualified students without regard to race, creed, color or national origin.

UNDERGRADUATE ADMISSION

BY ACT OF THE General Assembly of Virginia, men and women are admitted to the College on the same conditions. Applicants for admission must present their applications on printed forms obtained from the Office of Admissions. Applicants who will be dormitory residents during the fall semester should apply no later than February 15. Candidates for dormitory space for the semester beginning in February should apply no later than December 1. All applications received by these dates will be accorded equal consideration for admission. However, assignments to individual rooms are made after selection for admission, in the order of date of application for admission and, therefore, early applications are desirable.

Applicants for admission who will be day students are considered without regard to the above deadlines. However, no undergraduate day students who will be degree candidates will be admitted later than one week prior to the beginning of registration.

The College is primarily a residential institution and requires that all undergraduate students reside in the College dormitories unless they are married or living with members of their immediate family. However, students who are over 21 years of age or seniors under 21 having parental approval may reside in private accommodations. Therefore, the number of students admitted as dormitory residents is dependent on the number of spaces created by the loss by graduation or withdrawal of students previously enrolled. Students who are eligible to attend the College as day students are considered on an individual basis. It is expected that all entering students should possess the necessary academic credentials to ensure academic success, provided the proper application to their work is demonstrated.

THE SELECTIVE PROCESS OF ADMISSION

The essential requirement for admission to the College of William and Mary is graduation in the upper half of the class from an accredited secondary school, or the equivalent of this requirement as shown by examination.

Since the number of applicants who meet the essential requirement is considerably in excess of the number that can be admitted, the College selects those who present the strongest qualifications in scholarship, character, and breadth of interests.

The high school record, test scores, recommendations by secondary school officials and information from such other sources as may be available will be utilized in selection. Characteristics such as determination, enthusiasm, self-discipline, imagination and ability to work with others are considered important. A record of interested participation in extracurricular activities when accompanied by good achievement in the field of scholarship increases the likelihood of the applicant's selection. The Admissions Committee, therefore, takes into account the participation of the candidate in such fields as publications, forensics, athletics, and the arts.

Recommendations from alumni or other persons may be requested when the College deems them necessary.

Scholarship

The College has no rigid subject matter unit requirements for entrance. It is recognized that secondary school offerings as well as the individual's abilities and interests must be considered in developing a program. However, it is considered important that entering students have pursued an academic program which will prepare them for the degree requirements at William and Mary. It is suggested when possible, that prospective students include in their secondary program (9th through 12th grades) the following units: four of English, three or more of mathematics, three or more of one foreign language (see section regarding requirements for degrees), two or more in science, and two or more in the social sciences. This suggested program is not intended as a requirement and the fact that students do not present the units listed will in no way bar their applications from consideration and acceptance.

Tests of the College Entrance Examination Board

Freshman applicants must take the Scholastic Aptitude Test and three Achievement Tests of the College Entrance Examination Board.

The Achievement Tests must be taken in English Composition, Foreign Language Reading—preferably in the language that the student plans to continue in College, and one additional test of the student's choice. (Students who have completed secondary school courses in Chemistry or Physics and wish to be placed in advanced sections of these courses are requested to take the Achievement Tests in these areas). These tests should be taken no later than January of the final year in secondary school. There are no minimum scores required, since the results of these tests are used with other information in determining the student's academic potential and for counseling and placement. Information regarding these tests may be obtained from secondary schools or by writing to the College Entrance Examination Board, Box 592, Princeton, New Jersey 08540, or Box 1025, Berkeley, California 94701, and the applicant must request that his scores be reported directly to the College from that agency.

Interviews

Interviews are not usually required. If after reviewing the record of an applicant, additional information is desired, an interview may be required by an alumnus or a member of the Admissions staff. Unless an interview is specifically requested by the Dean of Admissions, the fact that the applicant has not had an interview with a member of the Admissions staff will have no bearing on the action on his application. Individuals who desire an interview should contact the Office of Admissions in advance in order that a specific time and date can be arranged.

Early Decision Plan

The College admits a limited number of freshmen students under the Early Decision Plan. This is a special plan designed to reduce the burden of the admissions process for those applicants who are considered highly desirable for admission by the College and who fully intend to matriculate. Students applying for early decision should possess high academic qualifications and have decided that William and Mary is their first choice of colleges. Early decision applicants who are not selected under this plan will be considered along with other applicants for available spaces under the regular admission process.

Procedure to Be Used in Applying for Early Decision

1. Submit preliminary application card and application fee. Beginning in August preceding the final year in secondary school, all appli-

cants who have submitted a preliminary application card with fee will be sent a personal application form with complete instructions and a letter of intent to be submitted in applying for admission under the Early Decision Plan.

2. Applicants applying for admission under the Early Decision Plan are required to take the Scholastic Aptitude Test before the beginning of the senior year and the Achievement Test no later than January of their final year in secondary school.

3. Submit personal application, letter of intent, secondary school record, and Scholastic Aptitude Tests scores before November 1 of the senior year.

4. The Office of Admissions will notify the candidate of the action taken on his application for early decision by November 15.

5. The applicant who has been notified of his acceptance by the Office of Admissions must signify his final intention to enroll in the College by paying a non-refundable deposit by December 15.

Admission of Undergraduate Transfer Students

Transfer students from other institutions are admitted for the semesters beginning in September and February.

To be considered for admission, the applicant must have maintained an overall "C" average in courses taken for credit in other institutions.

No student may be considered for admission to the College (undergraduate, graduate, or law) unless he is, or at the time of departure was, in academic and social good standing at his previous institution or institutions. An official transcript or other communication from said institution must indicate this fact and that he is entitled to honorable dismissal.

Transfer students who possess the minimum qualifications are considered in relationship to the other applicants for the available spaces in an attempt to admit those students who present the strongest overall qualifications.

Students who have completed fifteen or more semester hours of work at an accredited institution are normally not required to take the Scholastic Aptitude and Achievement Tests of the College Entrance Examination Board.

Since Christopher Newport and Richard Bland Colleges are affiliated with the College of William and Mary, special consideration is given to applicants desiring to transfer from these institutions. The same factors that have been previously mentioned are used in these cases, and in addition, a committee is established in each of these institutions to

provide specific recommendations regarding the action to be taken on each applicant. Students attending Christopher Newport and Richard Bland Colleges who are desirous of attending William and Mary should contact the Registrar's Office at each institution, in order to secure the appropriate application forms and instructions.

Admission to Unclassified Status

Students who do not intend to pursue a degree but wish to take courses for credit during the day session may apply for admission as an Unclassified student. The minimum requirement for admission to Unclassified status is the same as for those seeking degree status. Students who desire Unclassified status should specify this in requesting application forms from the Office of Admissions.

Readmission

Students who are in good standing with the College but have not been in attendance in the day session for one or more semesters must submit an application for readmission and be readmitted by the Office of Admissions before they are permitted to register for classes in the day session.

Notification of Decision

Since qualifications of applicants must be considered relative to one another, decisions on individual candidates are delayed until other applications are examined. Candidates for admission under the Early Decision Plan can expect to receive notice of the action on their application around November 15. Students who are applying for regular admission will be notified around April 1. Applicants for the semester beginning in February will be notified of the decision on their applications as soon as feasible after December 1.

Admission to Audit Status

Students who wish to audit courses in the day session with no credit should contact the Office of the Dean of the Faculty of Arts and Sciences in order to obtain the appropriate forms to request permission to audit courses.

Admission to School of Continuing Studies

The School of Continuing Studies operates the Summer Session, Evening College, and Extension Division. The primary prerequisites

for admission to these divisions of the College are that the student be a high school graduate and be in good standing and eligible to return to the last college attended. The admission to one of these divisions of the College does not entitle the student to admission to the regular day session or degree status unless an application is submitted and approved by the Office of Admissions. Application forms to one of these divisions may be obtained from the Dean of the School of Continuing Studies.

The Advanced Placement Program

The College participates in the Advanced Placement Program of the College Entrance Examination Board. This program offers to able and ambitious students, who have a strong preparation, the opportunity to qualify for advanced placement and credit in Biology, Chemistry, English, History, Latin, Mathematics, Modern Languages and Physics.

Successful candidates for admission who wish to be considered for advanced placement and credit should take the Advanced Placement Test of the College Entrance Examination Board and have these scores reported to the College. After consideration of the test papers and other evidence concerning proficiency in the subject area, the student will be informed of the decision of the department concerned regarding advanced placement and credit. A student who is successful in gaining advanced placement and credit will be provided with more time than normal to pursue courses in areas related to his field of concentration or in other areas of interest, rather than the repetition of courses in which proficiency has been established by work on the secondary school level.

ADMISSION TO THE GENERAL HONORS PROGRAM

The College each year admits a limited number of beginning freshmen into a General Honors Program. This program brings together students of outstanding capability and makes available to them informal colloquia, honors courses, and other special academic opportunities. The object of the program is to stimulate within both the individual and the group the processes of intellectual excitement and intellectual growth.¹

Entering freshmen are selected for the program on the basis of College Board aptitude scores, rank in class, a letter of recommendation, and other evidences of high motivation and a sense of general

¹ See page 179 for additional information on general honors.

involvement. The normal process of admission, which occurs during the spring preceding registration, is as follows: (1) Invitations to apply for the program are extended by the Office of the Director of Honors to a reasonably select group of high school seniors who have already been accepted by the College. (2) Applications are to be returned as soon as possible in order to receive the most favorable consideration. (3) Every applicant is notified of the action taken on his application no later than June 30. The opportunity exists for a very limited number of students to enter the program in the second semester of their freshman year or as beginning sophomores.

Requests for further information or inquiries concerning the Honors Program should be addressed to: Director of Honors, College of William and Mary, Williamsburg, Virginia 23185.

UNDERGRADUATE ADMISSION TO THE SCHOOL OF BUSINESS ADMINISTRATION

Applicants must be admitted to the College prior to admission to the School of Business Administration. Application for admission to the School and its B.B.A. degree program is accepted the semester prior to the time the student expects to enroll in the School of Business Administration as a candidate for the B.B.A. degree but admission will not occur until all requirements for admission are met.

UNDERGRADUATE ADMISSION TO THE SCHOOL OF EDUCATION

Applicants must be admitted to the College prior to admission to the School of Education. Applications for undergraduate concentration are accepted the semester prior to the time the student expects to enroll in the School of Education as a concentrator. Final approval for admission will not be given until the student has attained junior standing in the College.

ADMISSION TO GRADUATE STUDY

Application forms for admission to graduate study under the Faculty of Arts and Sciences should be requested from the chairman of the department in which the applicant intends to do his major work. Forms for admission to graduate study in the Schools of Marine Science and Education should be requested from the offices of the respective Deans; for the Master of Business Administration program from the Associate Dean for Graduate Studies, School of Business Administration;

and for the Master in Teaching of Science program from the Director of the National Science Foundation Summer Institute. Beginning graduate students may be accepted for September or February of each year at the discretion of the department or school concerned, and also in June for degree programs in the Schools of Marine Science, Education, and Business Administration and in the Summer Institute. Applicants should be aware that deadlines for submitting applications vary with the individual departments and schools and are usually several months in advance of the time of admission.

Admission Requirements

Students are admitted as either regular or provisional graduate students, or as unclassified students. For admission as *regular graduate students* an applicant must have completed the requirements for a bachelor's degree at an accredited college, must have a quality point average of 1.5 on a 3.0 scale, and must have the recommendation of the department or school in which he intends to do his major work. Applicants with less than a 1.5 quality point average may be admitted as *provisional graduate students* upon the recommendation of the department or school concerned. All admissions must be approved by the dean having jurisdiction over the program involved.

Applicants who have received a bachelor's degree and who wish to take courses in the College but not to enter a program for an advanced degree may apply for admission as *unclassified students* to the Dean of Admissions. No unclassified student may receive graduate credit for a course without obtaining the consent of the instructor, the chairman of the department concerned, and the appropriate dean at the time of registration.

Certified transcripts of the applicant's record at every college or university previously attended and letters of recommendation from three persons familiar with his academic or professional background are required. Unless the applicant is notified otherwise, it is his responsibility to request his recommenders to submit letters to the College.

Applicants should also consult the additional requirements for admission described under the catalog listings of the individual departments and schools.

Graduate Record Examination and Admission Test for Graduate Study in Business

Applicants for admission to graduate study may be required to take the Graduate Record Examination by the department or school to

which they are applying. Applicants for the Master of Business Administration program are required to take the Admission Test for Graduate Study in Business. Applicants must register directly for these tests with the Educational Testing Service, Princeton, New Jersey 08540.

ADMISSION TO THE LAW SCHOOL

Application forms for admission should be requested from the Dean of the Marshall-Wythe School of Law. Applicants will be sent the usual forms which should then be completed and returned. Beginning students in law are accepted in June or September.

Applicants must have at least a 1.4 quality point average or its equivalent in their over-all undergraduate work (A—3 points, B—2 points, C—1 point, D—0 points), a baccalaureate degree before enrollment, and a satisfactory score in the Law School Admission Test.

Transfer from Other Law Schools

Students from law schools approved by the American Bar Association who have received a baccalaureate degree and who are in good standing may apply for admission to this school as transfer students. If admitted, credit will be given for work done at other approved law schools not to exceed sixty semester hours provided such work has been of a quality well above average.

Law School Admission Test

All applicants are required to take the Law School Admissions Test given each year in October, December, February, April and July on the campus of William and Mary and at various centers in the United States. A bulletin of information regarding this test may be obtained from any college's testing or counseling service or from the Educational Testing Service, Princeton, New Jersey 08540. *This test should be taken not later than February preceding the year of desired enrollment.*

Other Factors

As in the case of undergraduate admission, evidence of good moral character and the ability to make a desirable adjustment to law studies will weigh heavily in the consideration of applications for the Law School. An interview with an officer of the College or an alumnus of the College may be required. Recommendations by officials at a

candidate's previous college will be secured by the Dean of the Law School, and these recommendations will be considered carefully when the candidate's application is reviewed.

TUITION AND EXPENSES

THE COLLEGE RESERVES THE RIGHT TO MAKE, WITH THE APPROVAL OF THE PROPER AUTHORITIES, CHANGES IN TUITION AT ANY TIME

Payment of Accounts

Tuition, and room and board fees, and laundry are payable in advance by the semester, remittance being made by check drawn to the College of William and Mary.

Students will not be allowed to complete registration unless their registration cards have first been approved by the Treasurer-Auditor's Office. This preliminary procedure can be accomplished by mail and should be completed upon receipt of student's statement of account.

First semester accounts are due on or before September 5, or within 10 days after receipt of bill, if same is received after August 27. Second semester accounts are due on or before January 15.

Refunds to Students Withdrawing

Subject to the following regulations and exceptions, all charges made by the College for room, board and fees are considered to be fully earned upon the completion of registration by the student.

1. A student withdrawing within a period of five days after the scheduled registration period is entitled to a refund on charges except that \$25.00 shall be retained by the College to cover the expense of registration. (These refunds shall not include any deposits or advance payments that may have been required by the College as evidence of the student's intention to enroll.)

2. A student withdrawing at any time within the first 30 days after the scheduled period of registration shall be charged 25 per cent of all these charges: the semester's room rent, or the required deposit, whichever is greater, and laundry and tuition.

3. A student withdrawing at any time within the second 30 day period after the scheduled registration shall be charged 50 per cent of all of these charges: the semester's room rent, laundry and tuition.

4. A student withdrawing at any time after 60 days following the date of registration shall be charged the full semester's board, room rent, laundry and tuition.

5. No refunds of board, room, laundry and tuition will be made to a student who has been required to withdraw by the College regardless of the date of withdrawal.

6. Tuition, room rent, board and laundry are earned in full for unofficial withdrawals.

7. No refunds will be made on tuition for part-time students.

8. In cases of withdrawal during the first 60 days from College, charges for board will be calculated on a pro-rated basis determined by the date of official withdrawal provided the dining hall card is surrendered to the Treasurer-Auditor on this date.

Credits on Accounts of Scholarships Holders

Students holding scholarships are required to pay all fees less the value of the scholarship which they hold.

Withholding of Transcripts and Degrees in Case of Unpaid Accounts

Transcripts or any other information concerning scholastic records will not be released until college accounts are paid in full. Degrees will not be awarded to persons whose college accounts are not paid in full.

Cashing of Student Checks

The College does not have facilities for handling deposits for students' personal expenses but the Treasurer-Auditor's Office is prepared to cash checks up to \$25.00. All such checks should be made payable to the student or to cash. Under our regulations as a State institution, we are not permitted to cash checks made payable to the College of William and Mary.

TUITION AND OTHER EXPENSES

Tuition (\$330.00 per semester for State Students and \$797.00 for Out-of-State Students) is a payment towards the general maintenance and operating costs of the College including recreational and health facilities. (Board, room and laundry are additional.)

The Act affecting residency is as follows:

"Be it enacted by the General Assembly of Virginia, That no person shall be entitled to the admission privileges, or the reduced tuition charges, or any other privileges accorded by law only to residents or citizens of Virginia, in the State institutions of higher learning unless such person has been domiciled in and is and has been an actual bona fide resident of Virginia for a period of at least one year prior to the commencement of the term, semester, or quarter for which any such privilege or reduced tuition charge is sought, provided that the gov-

erning boards of such institutions may require longer periods of residence and may set up additional requirements for admitting students."

Laundry

The fee (\$20.00 per semester) covers the laundry requirements of the average student and is required of all students living in dormitories, sorority houses and fraternity houses.

Board

The College operates two large cafeterias and a snack bar, together seating over 1,600 persons. The dining halls are not operated for profit.

All students who are officially classified as freshmen and sophomores¹ and who are dormitory residents (including residents of the College-owned sorority and fraternity houses) will be charged for board at the rate of \$275.00 per student per semester. (Students entering for orientation, will be charged an additional \$12.00.)

Each student will be issued a Dining Hall Card which entitles that student to three meals daily for a period of approximately 120 days during the semester. The Christmas and Thanksgiving recesses during the first semester and the spring recess in the second semester are not included in the 120 days for which board is charged.

The Dining Hall Card will not be usable in the Wigwam (Coffee Shop).

It shall be optional with students not living in dormitories and students other than freshmen and sophomores whether they board in the College Dining Hall. They may elect to board by the semester in the Dining Hall in which case the charge for board will be \$275.00 per student per semester.

In cases of withdrawal during the first 60 days from the College, the student will be given a refund calculated on a pro-rata basis determined by the date of official withdrawal, provided the Dining Hall Card is surrendered to the Treasurer-Auditor on this date.

Owing to uncertain conditions prevailing with respect to the cost of food supplies and of food service, the College reserves the right to change its rates for board at any time throughout the year to meet such additional costs.

¹ For boarding purposes "Freshmen and Sophomores" is interpreted to mean those students in their first two years of residence in College.

Room Rent

Men: Room rent in the men's dormitories varies from \$100.00 to \$230.00 per semester depending on the size of the room, location, bath, etc.

Women: Room rent in the women's dormitories varies from \$155.00 to \$245.00 per semester depending on the size of the room, location, bath, etc.

ESTIMATE OF SEMESTER EXPENSES

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Board	\$275.00	\$275.00	\$275.00
Tuition and General Fee (State Student)	330.00	330.00	330.00 ¹
Room Rent	100.00	175.00	245.00
Laundry	20.00	22.00 ²	24.00 ²
	<hr/>	<hr/>	<hr/>
Totals	\$725.00	\$802.00	\$874.00

INCIDENTAL EXPENSES

It is impossible to estimate the exact cost to students of clothing, travel and incidental expenses. These are governed largely by the habits of the individual. The College endeavors to minimize temptation to extravagance. The size of Williamsburg aids materially in this matter by not subjecting the students to the diversions of a larger city. As the demands for extra money are small, parents are advised to furnish only a small sum.

The cost of books depends somewhat on the courses taken, but will seldom be less than \$125.00 a year and does not usually exceed \$175.00 a year.

Money for books cannot be included in checks covering college expenses; books should be paid for in cash or by separate check when purchased. Checks for books should be made payable to the William and Mary Bookstore.

¹ For out-of-State students add \$467.00.

² For excess over and above normal requirement.

NON-RECURRING FEES

Application fee	\$10.00
Room deposit	50.00
Room change fee	10.00
Diploma fee	10.00
Academic costume rent to seniors and graduate students	5.00

Application Fee—A non-refundable processing fee of \$10.00 is required with undergraduate freshmen and transfer applications for admission to the College. This fee is not credited to the student's account. Students applying for admission from Christopher Newport and Richard Bland Colleges are excluded from payment of this fee.

Room Deposit—A deposit of \$50.00 is required by the College for a student to reserve a room. This payment is made to the Treasurer-Auditor and is applied on the student's regular college account.

This deposit may be made by students already enrolled at any time after the beginning of the second semester, but *must* be paid before March 15. No rooms will be reserved for students who have not paid their room deposit by the specified date.

Students enrolling for the first time may not make a room reservation deposit until they have been notified of their admission to the College. The room deposit for entering students is not refundable.

Room assignments for women will be made by the Assistant Dean of Women. Room assignments for men will be made by the Assistant Dean of Men. Assignments will be made in order of priority of application.

Room Change Fee—Students are given two weeks to become settled in their rooms. Changes after this period will only be permitted after the payment of \$10.00.

Diplomas—The charge for diplomas for all degrees is \$10.00. This is payable one week or more before graduation.

Academic Costumes—Senior students may procure caps and gowns from the College rental supplier at the opening of the Fall semester prior to Commencement. Graduate students may avail themselves of this service just prior to graduation. Rental fee, payable to the supplier, is \$5.00 for these items. Academic hoods will be provided to all degree recipients by the College just prior to graduation at a rental fee of \$1.00. All fees are payable upon receipt of the items mentioned.

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

THE College of William and Mary confers in course the following degrees, each under the jurisdiction of the Faculty or School indicated:

Faculty of Arts and Sciences: Bachelor of Arts (A.B.), Bachelor of Science (B.S.), Master of Arts (M.A.), Master of Science (M.S.), Master in Teaching of Science (M.T.S.), and Doctor of Philosophy (Ph.D.).

School of Business Administration: Bachelor of Business Administration (B.B.A.), and Master of Business Administration (M.B.A.).

School of Education: Master of Arts in Education (M.A.), Master of Education (M.Ed.), and Doctor of Education (Ed.D.).

School of Law: Juris Doctor (J.D.), and Master of Law and Taxation (L. & T.M.).

School of Marine Science: Master of Arts (M.A.), and Doctor of Philosophy (Ph.D.).

The undergraduate degrees of Bachelor of Arts and Bachelor of Science are liberal arts degrees. A liberal education, although it has no single fixed definition, is more than a haphazard accumulation of courses. Its essential purpose is to liberate and broaden the mind, to produce men and women with vision and perspective as well as specific practical skills and knowledge. The major foundations on which a liberal education must be built are well-recognized. For these reasons, the College requires each undergraduate to plan, with the help of a faculty advisor and within the framework of broad general degree requirements, a total program of liberal education suited to his particular needs and interests.

The general degree requirements set forth below are designed to permit a high degree of flexibility for each student in planning his particular program of liberal education within broad basic limits. In this planning, a student and his advisor should build upon his previous preparation. A freshman should pursue at least one study in which he has interest and competence at the highest level his preparation allows. As early as possible he should explore some studies with which he is unfamiliar, in order to open up new interests and opportunities. Finally, he should take care to lay the foundations for his future

specialization, in college or beyond in graduate or professional school, by anticipating specific prerequisites.

A liberal education presupposes certain *proficiencies*. Foremost among these is the ability to express one's self clearly both in speech and writing, for clear expression goes hand in hand with clear thinking. Another invaluable foundation of a liberal education is some experience with a foreign language, at least to the point where a student begins to see for himself the cultural as well as practical values of foreign language study. Since students entering college differ widely in their previous preparation in these respects, the proficiency requirements of the College establish only basic minimums; but each student is encouraged to proceed beyond these minimums to whatever extent his interests and abilities suggest.

In the *Freshman Seminar*, the College offers every entering student an opportunity, in the context of a small class situation, to explore a challenging topic of special interest to him. He may choose a Seminar in a field in which he has already developed an interest and competence, or in an unfamiliar field about which he is curious. In either case he will participate closely in an exciting intellectual endeavor with his fellow students and a member of the faculty, who will probably also be his academic advisor.

The *Area Requirements* are designed to ensure that every student will explore at least on an introductory level each of the broad areas of arts and sciences: the humanities, the social sciences, and the natural sciences and mathematics. In one of these areas every student will continue this exploration through the required sequence of two advanced courses building upon the two introductory ones.

Finally, in the area of his *Concentration*, every student is required to pursue in depth the exploration of a specific academic discipline or two or more related ones through an interdisciplinary concentration. Here he has the fullest possible opportunities for both independent study and work in a Departmental Honors program, as well as for regular course work.

Achievement of its educational purposes requires that the College maintain standards of scholarly achievement and an environment conducive to learning and that to this end it adopt necessary regulations governing academic performance. The Faculty of Arts and Sciences of the College determines the degree requirements for the A.B. and B.S. degrees, including the determination of the regulations governing academic standards, grading, and class attendance. Obligation to its educational mission gives to the College the right and responsibility, subject to the employment of fair procedures, to suspend, dismiss or

deny continuance of a student whose academic achievement does not meet established College standards.

The requirements for the baccalaureate degrees of Bachelor of Arts and Bachelor of Science are set forth immediately below. Those for the post-graduate degrees under the jurisdiction of the Faculty of Arts and Sciences will be found on pages 106-109 and those for the degrees under the jurisdiction of the various Schools in the sections of this catalog for each School.

Requirements for degrees are stated in terms of "semester credits" which are based upon the satisfactory completion of courses of instruction. One semester credit is given for each class hour a week through a semester. Not less than two hours of laboratory work a week through a semester will be required for a semester credit. A semester is a term of approximately eighteen weeks or one-half of the college session.

Courses of the 100 series are primarily for freshmen, 200 for sophomores, 300 and 400 for juniors and seniors. Courses of the 500 and 600 series are intended for graduate students only. Odd numbered courses are ordinarily offered in the first semester but may be offered in the second semester also; even numbered courses are ordinarily offered in the second semester but may also be offered in the first semester.

A continuous course covers a field of closely related material and may not be entered at the beginning of the second semester without approval of the instructor.

No credit will be counted toward a degree for the first semester of an elementary foreign language unless followed by the successful completion of the second semester of that language.

REQUIREMENTS FOR THE DEGREES OF A.B. AND B.S.

A. GENERAL REQUIREMENTS

One hundred and twenty-four semester credits are required for graduation. Of these one hundred and twenty-four semester credits, one hundred and twenty must be in academic subjects and four in a program of activities in Physical Education. A minimum of 120 quality points in academic subjects is required.

The student must make a minimum quality point average of 1.0 for all courses in the field of concentration for which he receives an official grade.

No degree will be granted by the College until the applicant has been in residence at least one college year and made a minimum of thirty semester credits at the College in Williamsburg. This period must include the last year of the work required for the completion of the degree.

A student must fulfill the general degree requirements set forth in the catalog at the date of entrance to the College, and he must fulfill the concentration requirements in effect when the choice of concentration is declared. A student who fails to graduate within six calendar years of the date of entrance to the College relinquishes the right to graduate under the requirements set forth in the catalog at the time of entrance, and must fulfill the requirements in effect during the final session of his attendance at the College.

A student must complete the requirements for a degree within ten semesters of residence in College provided, however, that when a student has been permitted to reduce his schedule below that normally required, the total period of residence permitted for the completion of the degree requirements shall be extended in proportion to the reduction permitted. In the application of this requirement, attendance in Summer Session will be included. Such attendance will be counted on the basis of the ratio of the Summer Session course load to the normal program of the regular session. Students transferring from other institutions should expect to spend at least two years in residence at the College.¹

B. PROFICIENCIES, AREA REQUIREMENTS, CONCENTRATION

The credits for a degree must be completed in accordance with the following specific requirements.²

¹An entering freshman may receive a limited amount of credit or advanced placement in certain fields through satisfactory achievement on the Advanced Placement Tests of the College Entrance Examination Board or, in some instances, on other evidence of superior preparation in secondary school. These fields are Biology, Chemistry, English Composition, English Literature, American History, European History, Latin, Mathematics, French, German, Spanish, and Physics. Further information can be obtained from the Dean of Admissions.

² These requirements represent the normal path to a degree from the College of William and Mary. However, in exceptional cases, a student by petition to the Committee on Degrees may be released from normal requirements and permitted to devise his own program in consultation with his advisor and subject to the approval of the Committee. In addition, a student may petition the Committee on Degrees to receive credit for any course in the curriculum by examination. Upon granting such a petition, the Committee shall request the department in which the course is normally offered to set an appropriate examination and to certify the results thereof to the College Registrar and to the Committee.

1. Proficiencies

- A. *Foreign Language:* Unless a student presents at least four entrance credits in a single ancient or modern foreign language, or demonstrates equivalent proficiency by examination, he must satisfactorily complete a fourth semester course (or above) in a language in college.
- B. *Writing:* A student whose combined SAT Verbal and English Achievement scores fall below 1300 must satisfactorily complete a one-semester course in writing, normally during his freshman year, unless he applies to take and demonstrates satisfactory performance on a writing test administered during orientation week. A student whose combined scores are 1300 or better may take a course in writing but is not required to do so.
- C. *Physical Education:* A student must acquire four semester credits in a physical education program. Each of the four requirements may be satisfied by electing a semester course in an activity offered by the Departments of Physical Education, by participating for a season in a varsity sport, or by passing one of the skills tests offered. A student must begin this program in his first semester of residence and continue in the program until the requirements have been satisfied.

2. Area Requirements

A student must satisfactorily complete eight courses distributed among the following areas:

- Area I. Classical Studies, English, Fine Arts, Modern Languages, Music, Philosophy, Religion, Theatre and Speech.
- Area II. Anthropology, Economics, Government, History, Psychology, Sociology.
- Area III. Biology, Chemistry, Geology, Mathematics, Physics.

The eight area courses must be chosen according to the following rules:

(1) Each student must take a minimum of two semester courses within each area, not including courses in the department of his concentration.

(2) Each student must take two additional courses outside the area of his concentration. At least four courses outside the area of concen-

tration must form a logical sequence of introductory and advanced courses or a logical combination of courses on an interdisciplinary topic.

(3) Each student must complete at least six of these eight required courses before he will be permitted to register for his fourth academic year.

(4) Certain courses offered by a department assigned to one area may be designated by the Curriculum Committee as suitable for meeting these requirements in another area; but no student may fulfill the area requirements in more than one area with courses offered by the same department.

(5) The semester courses in writing and foreign language courses which are not primarily concerned with the study of the literature or culture in the language do not count toward meeting the area requirements.

(6) In addition to satisfying the Area III requirement by two semester courses in a science, a candidate for the B.S. degree must take two additional semester courses in a different science, selected in accordance with the requirements of the department in which the student is concentrating.

3. Concentration

Before the end of the sophomore year each student shall select either a departmental or an interdisciplinary concentration. A student cannot change his concentration after registration for the second semester of the senior year.

A. Departmental concentrations are offered (*for the Bachelor of Arts degree*) in Anthropology, Business Administration,¹ Classical Studies, Economics, Education, English Language and Literature, Fine Arts, Geology, Government, History, Mathematics, Modern Languages,² Music, Philosophy, Physical Education for Men, Psychology, Sociology, Theatre and Speech, and (*for the Bachelor of Science degree*) in Biology, Chemistry, Geology, Mathematics, Physical Education for Men, Physics, and Psychology.

The student in consultation with the chairman of his major department shall select the courses for concentration. A department must

¹ The School of Business Administration offers concentration in Accounting and Management only to students who declared concentrations in Business Administration under the A.B. degree prior to the inauguration of the B.B.A. degree.

² The Department of Modern Languages offers concentration in French, German and Spanish.

require at least twenty-seven semester credits in a single subject field for a concentration but may not require more than forty-two semester credits in all. When a student concentrates in a field in which he has received credit for an area requirement, such credit shall be counted in the total field of concentration.

No student shall be permitted to apply toward a degree more than forty-eight semester credits in a subject field. The subject fields include: Anthropology, Biology, Business Administration,¹ Chemistry, Economics, Education, English, Fine Arts, French, Geology, German, Government, Greek, History, Latin, Mathematics, Music, Philosophy, Physical Education for Men, Physics, Psychology, Sociology, Spanish, and Theatre and Speech.

Students in Elementary and Secondary Education may apply twenty-seven semester credits and twenty-four semester credits respectively in Education toward the A.B. degree.

B. Interdisciplinary concentrations are supervised by a Committee On Interdisciplinary Studies. Any student may submit a plan for an interdisciplinary concentration for the approval of this committee.

ACADEMIC REGULATIONS

STUDENT'S PROGRAM

All students, other than freshmen, graduate and part-time students are required to carry the normal program of at least fifteen and no more than seventeen semester hours (counting courses in Physical Education), with the exception that any student may, with the consent of his adviser, carry eighteen semester hours (counting courses in required Physical Education). Freshmen may carry a minimum of fourteen semester hours counting courses in required Physical Education. Non-credit courses may be carried in addition to the normal load and will be listed on the student's transcript with the notation "Pass" or "Fail," but will in no way count toward a degree.

Further deviations from the normal program, when warranted by special circumstances, will be permitted by the Committee on Academic Status after the registration period; students desiring this permission should apply in writing to the Dean of Men or the Dean of Women. Only to exceptionally able students, however, will the Com-

¹ This regulation applies only to students who declared concentration in Business Administration under the A.B. degree prior to the inauguration of the B.B.A. degree.

mittee on Academic Status grant permission to carry more than eighteen semester hours.

CLASSIFICATION OF STUDENTS

A sophomore student must have completed at least twenty-four (24) credits in academic subjects, with at least twenty-four (24) quality points. A junior student must have completed at least fifty-four (54) credits in academic subjects, with at least fifty-four (54) quality points. A senior student expecting to graduate in June must have completed eighty-five (85) credits in academic subjects, with at least eighty-five (85) quality points. The social standing of every student is identical with the academic.

CONTINUANCE IN COLLEGE

A student must accomplish in each semester of attendance after the first semester of the freshman year a minimum of 8 semester credits in academic subjects and earn at least 5 quality points.

A student in his freshman year must acquire at least 18 semester credits and earn 14 quality points. In his sophomore year a student must earn 24 semester credits and 24 quality points. Moreover, a student who has completed two years may not continue in College unless he has accumulated 48 semester credits with 48 quality points including satisfactory completion of 12 distribution courses.* He must also have declared his field of concentration. A student who has met these requirements except for certain distribution courses may be permitted to attend the summer session of this College in order to complete the distribution requirements, but this permission does not extend to satisfaction of the credit and quality point requirement.

In his third and fourth years of attendance a student must accomplish a minimum of 27 semester credits with 27 quality points in each year.

WITHDRAWAL FROM COLLEGE

Students who desire to withdraw from College should apply to the Dean of Men or the Dean of Women for permission to withdraw. The permanent record card of any student who withdraws from Col-

* The requirement of 12 distribution courses will not be applied to students who are successfully pursuing one of the College's pre-professional programs.

lege without permission from the proper dean will carry the notation "Withdrew unofficially."

When students withdraw after the date on which midsemester grades are reported and before the completion of the semester, their records bear a notation indicating for each course whether the student was passing or failing. The symbols used for this purpose are WP (withdrew, passing) and WF (withdrew, failing).

It is the policy of the College to allow appropriate credit to students who are required by the Selective Service System or other military organization to withdraw from college during the course of a semester to enter military service. The regulations defining this policy are available on request.

CLASS ATTENDANCE

An educational system centered upon classroom instruction is obviously predicated on the concept of regular class attendance. In support of this concept, the following principles are to be observed:

1. Except for reasonable cause, students are expected to be present at all regularly scheduled class meetings, particularly their last scheduled class in each of their courses preceding and their first scheduled class in each of their courses following the Thanksgiving, Christmas, and Spring holidays.

2. Students whose attendance becomes unsatisfactory to the extent that their course performance is affected adversely should be so informed by their instructor and the same reported to the Dean of Men or Dean of Women.

CHANGES IN REGISTRATION

In order to add a course to or drop a course from the program of courses for which they originally registered, men students must make application for such a change to the Dean of Men, and women students, to the Dean of Women. If the application is granted, the dean will then notify the Registrar of the change. The Registrar, in turn, records the change on the student's registration card and informs the instructor or instructors concerned. *Unless a course change has been made in that manner it has no official standing and will not be recognized as valid by the College.* After the first week of classes in a semester, the only course changes which are permitted by the deans are those which, in the opinion of the Committee on Academic Status, warrant such action. Petitions for exceptions must be presented in

writing to the Committee through the offices of the Dean of Men or the Dean of Women.

EVALUATION OF CREDITS FROM OTHER INSTITUTIONS

The credits of students transferring from other institutions will be evaluated only tentatively upon matriculation. The final evaluation of credits earned at any time elsewhere than at this institution will be determined by the quality of work completed at this college. Evaluations of records are not made by the Committee on Degrees until after students have been selected for admission. In general, credits from accredited institutions are accepted provided they carry a grade of "C" or better and are comparable to courses offered at the College. No student may assume that credit will be given for work at other institutions until he has a written statement as to what credit will be accepted. In particular, any student of the College in Williamsburg who proposes to attend a summer session elsewhere must have written permission in advance from the Chairman of the Committee on Degrees in order to insure that the credit may be transferred to the College in Williamsburg. Credits carrying a grade of "D" will not be accepted for transfer to the College of William and Mary. In determining the number of quality points on credits accepted from other institutions which may be counted toward the minimum of one hundred twenty required for graduation, credits of grade "C" or higher will be considered as having a value of "C." Credit for extension courses in the field of concentration or for the requirements for the baccalaureate degree shall be limited to one-fourth of the total credit hours required. Normally, no more than sixty-two academic credits will be transferred from colleges accredited to offer only two years of academic work on the college level. It is the policy of the College not to grant credit for attendance in service schools or training programs in the Armed Forces unless it can be demonstrated that such attendance is the equivalent of a course or courses offered at William and Mary. Academic credit for courses taken while on military service at accredited colleges, universities or language institutes may be transferred in the normal manner. No credit will be granted for general military training or for the college level General Educational Development Tests.

SYSTEM OF GRADING AND QUALITY POINTS

The work of each student in each course in an academic subject is

graded A, B, C, or F. These grades have the following meanings: A, excellent; B, good; C, satisfactory; and F, failure. For each semester credit in a course in which a student is graded A he receives 3 quality points; B, 2; C, 1. F carries no credit and no quality points. Courses taken on a pass-fail basis and work in required Physical Education are graded P (pass) or F (failure).

In addition to the grades A, B, C, and F, the symbols "G," "I," "X," "WP," and "WF" are used on grade reports and in the College records. "G" indicates that the instructor has deferred reporting the student's grade. "I" indicates that the student has postponed, with the consent of the instructor, the completion of certain required work other than the final examination. "X" indicates absence from the final examination. "I" automatically becomes F at the end of the next semester if the postponed work has not been completed. "X" automatically becomes F at the end of the next semester unless a deferred examination is permitted by the Dean of the Faculty of Arts and Sciences. "WP" (withdrew, passing) and "WF" (withdrew, failing) indicate the standing of a student who withdrew from the College between midsemester and the end of the semester.

Reports showing the standing of students in their classes are sent to parents or guardians at the middle and the end of each semester. Students who in any semester accomplish a normal program of studies with a quality point average of 2.20 and no grade below "C" will be placed on the Dean's List of Distinction for the following semester.

EXAMINATIONS

The examinations, given at the end of each semester, take place at the times announced on the examination schedule, which is coordinated by the Dean of the Faculty of Arts and Sciences and posted at least two weeks before the beginning of the examination period. Students are required to take all of their examinations at the time scheduled, unless excused on account of illness or other sufficient reason by the Dean of Men or the Dean of Women. Students should present their reasons for an expected absence to the proper dean in advance of the examination. No excuse on the ground of illness will be accepted unless it is approved by the College physician.

Deferred examinations are provided for students who have been excused by the Dean of Men or the Dean of Women from taking their examinations at the regular time. The deferred examinations for courses in the first semester are given in the fourth week of the second semester; the deferred examinations for courses in the second se-

mester are given during the orientation period in September. Except under very exceptional circumstances students are not permitted to postpone the taking of a deferred examination beyond the first occasion thus regularly provided; and in no case will permission to take a deferred examination be extended beyond a year from the time of the original examination from which the student was absent. The schedule of the deferred examinations, coordinated by the Dean of the Faculty of Arts and Sciences, will be posted several days in advance of the time at which they are given, and a copy of it will be mailed to each student who is entitled to take a deferred examination.

The College does not authorize re-examinations.

DEPARTMENTAL HONORS PROGRAM¹

The Departmental Honors Program provides special opportunities for the intellectual stimulation and development of superior students in certain departments through independent study. Departments participating in the program during the 1970-71 academic session are Anthropology, Biology, Classical Studies, Economics, English, Fine Arts, Government, History, Modern Languages, Philosophy, Physics, Psychology, and Sociology.² Students in this program may, as the result of distinguished work, be awarded a degree with "Honors," "High Honors," or "Highest Honors."

1. *Eligibility, Admission and Continuance in the Program*

- A. Eligibility is contingent upon the student's achieving a minimum quality point average of either (1) 2.0 on a cumulative basis by the end of the junior year, or (2) 2.0 for the junior year alone.
- B. A student who wishes to pursue honors work and who has good reason to believe that he will qualify under paragraph "A" above should declare his interest as early as possible to the Chairman of his Department. Such declaration should be made in the spring of his sophomore year when he declares his field of concentration but may be made as late as the spring of his junior year. Application for admission to honors must be made in the spring of the junior year. The student who is acceptable to the Chairman of the Department and whose eligibility has been certified by the Dean of the Faculty of Arts

¹ See page 179 for information on the General Honors Program.

² See the descriptions under these departments for specific requirements.

and Sciences will be admitted to candidacy (subject to considerations of teaching staff availability) prior to registration in the fall of the student's senior year.

- C. The continuance of a student in the Honors Program is contingent on his maintaining what his major department judges to be a sufficiently high standard of work.

II. Minimum Requirements for a Degree with Honors

- A. Satisfactory completion of a program of reading and research supervised by a faculty member designated by the head of the student's major department. Six hours of credit in a course designated 495-496 in each department offering Honors shall be awarded each student satisfactorily completing the program.
- B. Satisfactory completion of the general requirements for the degree of A.B. or B.S.
- C. Presentation of an Honors Essay or completion of an Honors Project acceptable to the major department. This requirement must be met by May 1 of the student's senior year.
- D. Satisfactory performance in a comprehensive examination in the field of the student's major interest.

III. Examining Committee

- A. Each comprehensive examination shall be set and judged and each Honors Essay or Project shall be judged by an examining committee of not less than three members, including at least one member of the faculty of the candidate's major department and at least one faculty member from another department.
- B. Examining committees shall be appointed by the Dean of the Faculty of Arts and Sciences.

IV. Standards

- A. Final determination of a student's standing with respect to honors shall rest with his examining committee. The committee shall take into account (1) the recommendation of the major department, (2) the recommendation of the major adviser, and principally (3) its own judgment of the comprehensive examination and essay or project.

- B. A minimum grade of "B" on both the comprehensive examination and the essay or project is required for "Honors." The award of "Honors," "High Honors," or "Highest Honors" shall be determined by the student's examining committee.
- C. When a student's work does not, in the opinion of the Committee, meet the minimum requirements for honors, the faculty members supervising the student's Honors work will determine what grade should be granted. A student may be dropped from honors work at the end of the first semester.

GRADUATE STUDY UNDER THE FACULTY OF ARTS AND SCIENCES

The following general requirements apply to the degrees of *Master of Arts* in Biology, Chemistry, English, Government, History, Marine Science, Mathematics, Physics, Psychology, and Sociology; *Master of Science* in Mathematics and Physics; and the *Doctor of Philosophy* in History, Marine Science, Physics, and Psychology. In addition to these general requirements special requirements for the various disciplines are listed under the heading of the appropriate department or the School of Marine Science.

The requirements for the degree of *Master in Teaching of Science* will be found in the Summer Session Catalog.

Information regarding the degrees of *Master of Arts* in Education, *Master of Education*, *Master of Law and Taxation*, *Master of Business Administration*, and *Doctor of Education* will be found under the heading of the appropriate school.

Degree of Master of Arts

- I. The chairman of the department or the dean of the school in which the student concentrates will plan and approve the student's program.
- II. A minimum residence period of one regular session or of four summer sessions of ten weeks each is required.
- III. Each student must satisfy the requirements in language prescribed by the department or school in which he is enrolled. The minimum requirement is adequate command of English and one other language in which there is a significant literature relevant to the discipline or program in which the degree is sought. The manner of fulfillment of language requirements

shall be at the discretion of the department or school subject to the approval of the Committee on Graduate Studies.

- IV. At least twenty-four semester credits of advanced work, of which at least one-half have been earned in courses numbered above 500, with a quality point average of 2.0 are required for the M.A. degree. No credit will be given for any grade below C.
- V. The student becomes a candidate for the Master's Degree upon recommendation of his major department or school and approval of the Committee on Graduate Studies of the Faculty of Arts and Sciences after completion of a minimum of one semester of graduate work.
- VI. The student must present a thesis approved by the chairman of the department or the dean of the school in which he concentrates and by the student's examination committee. He must register for 560, Thesis, for at least one semester and may repeat this registration. This registration does not alter in any way the 24 credits in course work required for the M.A. degree. The thesis must be submitted in final form for acceptance or rejection two weeks before the student expects to receive the degree. The degree will not be granted until three bound copies have been presented by the student to the Associate Librarian.
- VII. An examination covering the entire field of study is required. This examination is conducted by the student's examination committee.
- VIII. All requirements for the degree must be completed within a maximum period of six calendar years after commencing graduate study as a candidate for the degree.

NOTE: The student's major professor with two or more members of the faculty, appointed by the Graduate Dean of Arts and Sciences in consultation with the chairman of the department or dean of the school in which the student concentrates, will act as his examination committee.

Degree of Master of Science

With the exception of a thesis, the general requirements for the degree of Master of Science are the same as for the Master of Arts. In place of the thesis, a candidate must successfully complete eight additional semester hours of course work.

Degree of Doctor of Philosophy

- I. A minimum of three years of graduate study beyond the baccalaureate is required. At least one academic year beyond the first must be spent in continuous residence as a full-time student at The College of William and Mary.
- II. Course requirements for doctoral students shall be at the discretion of the major department or school.
- III. Each doctoral student must satisfy the requirements in language prescribed by the department or school in which he is enrolled. The minimum requirement is adequate command of English and one other language in which there is a significant literature relevant to the discipline or program in which the degree is sought. The manner of fulfillment of language requirements shall be at the discretion of the department or school subject to the approval of the Committee on Graduate Studies. This requirement must be fulfilled before the student may complete his comprehensive qualifying examination.
- IV. Each doctoral student must pass a comprehensive qualifying examination designed to demonstrate competence in his field of study. Methods of examination, whether written or oral, shall be at the discretion of the student's department or school. An examining committee shall be appointed for each student by the Graduate Dean of Arts and Sciences upon the recommendation of the department or school.
- V. The doctoral student must pass the comprehensive qualifying examination before being admitted to candidacy. Admission to candidacy is required before the dissertation can be accepted.
- VI. Each candidate for the Ph.D. must submit an acceptable dissertation based on original research and constituting a contribution to scholarly knowledge. A dissertation committee consisting of at least five (5) members, one of whom must be from outside the student's major department or school, shall be named by the Graduate Dean of Arts and Sciences upon the recommendation of the department or school. The committee may include qualified persons from outside the College, but a majority of the committee, including the director of the dissertation, who shall serve as chairman, must be members of the faculty of the College.

- VII. Each candidate must successfully defend his dissertation in a final examination before it can be accepted by the College. This examination may be written or oral at the discretion of the department or school concerned and shall be open to the faculty and to such outside persons as the department or school may invite.
- VIII. Acceptance of the dissertation by the College is conditional upon the deposit of a master microfilm negative with University Microfilms, Ann Arbor, Michigan. The requisite fees shall be paid by the student.
- IX. All requirements for the doctoral degree must be completed within seven (7) calendar years of the time the student is admitted to the doctoral program.

IV. FIELDS OF CONCENTRATION AND COURSE DESCRIPTIONS

THE chapters of this section describe, in alphabetical order, the requirements for concentration in the various fields offered by the College according to the departments and schools offering them. The chapters also describe specific requirements for graduate work in disciplines in which work is offered, as well as requirements for departmental honors study, when that is provided. The last three chapters describe the programs of the School of Continuing Studies and the Virginia Associated Research Campus, and the pre-professional programs that the College offers.

Because the course descriptions in the chapters that follow are a record of the courses taught during the 1970-71 session, they do not provide all of the information necessary to plan academic programs according to the newly adopted requirements for baccalaureate degrees explained in the previous chapter. Most of the courses described here will be taught in the 1971-72 session, but some of them will not be. During the spring of 1971 the departments and schools of the College will publish lists of courses to be offered in the 1971-72 session so that students will be able to plan their academic programs prior to the next session. The explanation of course descriptions that appears below will apply to courses to be offered in the 1971-72 session.

EXPLANATION OF COURSE DESCRIPTIONS

(*) Starred courses may be taken only with the consent of the instructor.

(†) Daggered courses may be taken only with the consent of the head of the department or dean of the school concerned.

Pairs of numbers (201, 202) indicate continuous courses. A hyphen between numbers (101-102) indicates that the courses *must* be taken in the succession stated.

Courses involving laboratory or studio activity are so labeled. All others are classroom courses.

Semester hour credit for each course is indicated by numbers in parentheses.

FACULTY OF ARTS AND SCIENCES

DEPARTMENTS OF INSTRUCTION

ANCIENT LANGUAGES (GREEK, LATIN, CLASSICAL CIVILIZATION):
See below, CLASSICAL STUDIES, p. 129.

Anthropology

PROFESSOR ALTSHULER (*Chairman of the Department*). ASSOCIATE
PROFESSORS BALLINGALL AND BARKA. ASSISTANT PROFESSOR REINHART.¹
LECTURERS FAMA AND McCANN.²

REQUIREMENTS FOR CONCENTRATION

Concentration in Anthropology requires 30 semester credits in anthropology, including Anthropology 201, 202, 301, 302, 401, and 402. Honors candidates will take 495 and 496 in place of 402.

DESCRIPTION OF COURSES

201. Introductory Anthropology. Fall (3) Staff.

A general introduction to the field of anthropology. Particular attention will be given to recent archaeological discoveries concerning the origins of man, the development of agriculture, and the beginnings of urbanization.

202. Cultural Anthropology. Spring (3) Staff.

The application of the concept of culture to the study of contemporary societies, both primitive and modern. Such institutional areas as magic and ritual; crime, custom, and law; economy; and courtship, marriage and child-rearing will be analyzed cross-culturally.

301. Methods in Archaeology. Fall (3) Mr. Barka.

A general introduction to field and laboratory techniques of pre-historic and historic archaeological research.

¹ On leave of absence, first semester 1970-71.

² Visiting Lecturer, first semester 1970-71.

302. Methods in Ethnography. *Spring* (3) Miss Ballingall.

An introduction to field study including the collection and interpretation of data. The course will also include a review of techniques developed by ethnographers for the study of living communities.

311. Archaeology of North America. *Fall* (3) Mr. Reinhart.

The prehistoric peopling of the New World; the diffusion of culture from the great civilizations of Meso-America to other culture areas; the relation of prehistoric culture to historic tribes. (Not offered 1970-71.)

314. Indians of North America. *Spring* (3) Mr. Reinhart.

A survey of the major culture areas of native North America. The diffusion of cultural traits from Meso-America, Oceania, and Asia as well as diffusion within North America will be analyzed.

316. The Virginia Indians. *Spring* (3) Mr. McCary.

A study of the origins and culture growths of the Virginia Indians from 15,000 B.C. to A.D. 1600. Careful attention will be given to the classification of artifacts associated with the various culture periods. (Not offered 1970-71.)

321. Archaeology of Middle and South America. *Spring* (3) Mr. Reinhart.

An introduction to the prehistory of Middle and South America with special attention to the development of Aztec, Maya, and Inca civilizations.

323. Ethnology of South America. *Spring* (3) Mr. McCann.

A descriptive survey of the major culture areas of South America, analyzed in terms of such variables as race, language, ecology, dominant values, and culture contacts. (Not offered 1970-71.)

331. Ethnology of Africa. *Fall* (3) Mr. Altshuler.

A descriptive survey of the major culture areas of Africa, analyzed in terms of such variables as race, language, ecology, dominant values, and culture contacts.

342. Ethnology of Southeast Asia. *Fall* (3) Miss Ballingall.

A descriptive survey of the major ethnic groups of Southeast Asia, analyzed in terms of such variables as ecology, physical type, language, dominant values, and personality structure. The course will also touch upon contemporary problems in Southeast Asia.

344. Ethnology of Oceania. *Fall* (3) Miss Ballingall.

A descriptive survey of the Pacific Island World, including Aboriginal Australia, analyzed in terms of such variables as social organization, cultural pattern, and culture contact. (Not offered 1970-71.)

352. Archaeology of Europe. *Spring* (3) Mr. Barka.

A survey of the prehistoric and early historic cultures of Europe, covering the Paleolithic, Neolithic, Bronze, and early Iron Ages. Comparisons will be made with the cultural development of Asia, the Middle East, and Africa.

401. Anthropological Theory. *Fall* (3) Mr. Altshuler.

An analysis of the development of anthropological theory focusing upon key problems, concepts, and hypotheses as presented by such "schools" as the evolutionists, diffusionists, and functionalists.

402. Anthropological Research. *Spring* (3) Staff.

Independent study which will culminate in a senior essay. Required of all concentrators. (Honors candidates will take 495 and 496 in place of 402.)

411. Cultural Patterns and Technological Change. *Fall* (3) Miss Ballingall.

An examination of the part played by culture in facilitating or impeding technological development in small societies. The approach will be to analyze the interdependence of various factors, such as cultural values, family structure, socialization process, and sustenance pattern, as these bear upon the central theme of technological development. Case studies by anthropologists from a variety of cultures will be presented.

417. Problems in Anthropology. *Fall* (3) Mr. McCann.

Designed primarily for anthropology concentrators this course will explore in depth some particular topic in anthropology. The single topic will be selected from subareas within the discipline such as primatology, human ecology, kinship systems, acculturation, and comparative value systems.

422. Personality in Culture. *Spring* (3) Mr. Altshuler.

The relationship of personality type to cultural factors such as myth and ritual, subsistence patterns, language, and child rearing will be

considered utilizing data from a variety of cultures. Special attention will be given to differing concepts of identity, and mental illness and health.

430. Descriptive Linguistics. *Fall* (3) Mr. Fama. Same as English 403.

A study of contemporary linguistic theory and some practical methods of language analysis, including a comparison of the structures of diverse languages.

432. Historical Archaeology. *Spring* (3) Mr. Barka.

The archaeology of the era since the beginning of the exploration by Europeans of the non-European world, with major emphasis upon North America. Artifacts of the period will be examined with a view toward reconstructing the daily life of the people.

440. Introduction to Historical Linguistics. *Spring* (3) Mr. Fama. Same as English 404.

This course surveys the major results of Indo-European Historical Reconstruction. Some consideration is given to the contributions of recent Generative Phonology and Indo-European. The course also includes some investigations into non-Indo-European Reconstruction.

450. Anthropology and Medicine. *Spring* (3) Mr. Altshuler.

The medical system of the United States will provide the basic unit of comparison for a review of the ways in which different societies cope with problems of ill-health. The focus will be upon cultural variation in definitions of "illness" and "therapy" and the manner in which such definitions and practices are interrelated with other aspects of culture.

HONORS STUDY

495-496. Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Honors Study in Anthropology will be enrolled in this course during both semesters of their senior year. The course comprises: (a) supervised research in the student's special area of interest; (b) the preparation and presentation by May 1 of an Honors Essay; and (c) satisfactory performance in a comprehensive oral examination in the field of the student's major interest.

Biology

PROFESSORS BYRD (*Chairman of the Department*), BALDWIN, BLACK, COURSEN, AND Terman. ASSOCIATE PROFESSORS ACETO, BROOKS, CAL-LARD, HALL, MANGUM, MATHES, AND SPEESE. ASSISTANT PROFESSORS GRANT, SCOTT, SIMONS, VAN WINKLE, VERMEULEN, AND WARE. INSTRUCTOR BECK.

REQUIREMENTS FOR CONCENTRATION

A minimum of 38 credits is required for concentration in Biology; Biology 101, 102 (8 credits), Biology 401 (4 credits), Biology 405, 408, or 419 (4 credits), and Biology 420 (1-2 credits) must be included. Chemistry 201, 202 is required for concentration in Biology. A maximum of 8 credits (which may include Chemistry 201, 202) may be approved in other departments for courses above the 100-level to be completed with a minimum grade of "C". It is recommended that all biology concentrators complete Physics 101, 102. The Department offers several Freshman Seminars which will include special sections of Introductory Biology and courses dealing with contemporary biological problems.

DESCRIPTION OF COURSES

101, 102. Introductory Biology. *Fall and Spring* (4,4) Mr. Cour-
sen and Staff, Fall semester. Mr. Brooks and Staff, Spring semester.

Concepts of modern biology based on molecular and cellular struc-
ture; a brief survey of the plant and animal kingdoms relating mor-
phology to physiology; discussions on ecology, organic evolution, and
the relation between biological problems and human society. *Three*
Class Hours, Three Laboratory Hours.

150. Freshman Seminar. *Fall and Spring* (Credit and Hours to
be arranged). Staff.

201. Comparative Anatomy of Vertebrates. *Fall* (4) Mr. Byrd.
Prerequisite: Biology 102.

Consideration of the evolution of the larger taxonomic groups of
chordates with a comparative study of their gross morphology. *Three*
Class Hours, Six Laboratory Hours.

202. Embryology of Vertebrates. *Spring* (4) Mr. Simons. *Pre-*
requisite: Biology 102.

Descriptions and analysis of the chief developmental events in the higher vertebrates. *Three Class Hours, Six Laboratory Hours.*

203. Growth and Organization in Plants. *Spring* (3) Mr. Mathes. *Prerequisites: Biology 101, 102.*

Discussion of cell growth, auxin balance, nutrition and division as factors which contribute to the determination of development pathways in plants. (Not offered 1970-71)

206. Plant Taxonomy. *Spring* (4) Mr. Baldwin. *Prerequisite: Biology 101.*

Phyletic relationships of flowering plants and of ferns; principles of classification; collection and identification of representative native and cultivated plants. *Two Class Hours, Six Laboratory Hours.*

208. Morphology and Phylogeny of Plants. *Fall* (4) Miss Speese. *Prerequisite: Biology 101.*

The morphology of representative lower plants is studied in the laboratory and in the field. Some experiments are performed. *Two class Hours, Six Laboratory Hours.*

209. Anatomy of Land Plants. *Fall* (4) Mr. Hall. *Prerequisite: Biology 101.*

A systematic survey of the major cell, tissue and organ types of the bryophytes, pteridophytes, gymnosperms and angiosperms. Taxonomy, life-cycles, paleobotany and evolutionary history of each group are discussed. *Three Class Hours, Six Laboratory Hours.* (Not offered 1970-71).

215. Vertebrate Biology. *Fall* (4) Mr. Brooks.

A study of the ecology, taxonomy, behavior and physiological ecology of vertebrates, with special emphasis on the lower vertebrates. *Three Class Hours, Six Laboratory Hours.* (Alternate years, not offered 1971-1972).

216. Invertebrate Biology. *Fall* (4) Miss Mangum.

Ecology, taxonomy, morphology, physiology and behavior of invertebrate organisms. Phylogenetic relationships are emphasized. *Three Class Hours, Six Laboratory Hours.*

301. Microbiology. *Fall* (4) Mr. Vermeulen. *Prerequisite: Biology 101.*

Homologies are stressed in the study of life using the elementary systems of selected bacteria and other microorganisms. With the ultimate goal of an understanding of current research, the areas covered include classical and modern techniques, biochemistry, sexual and asexual genetics. *Three Class Hours, Six Laboratory Hours.*

305. Phycology. *Fall* (4) Mr. Scott.

Structure, reproduction, life histories, ecology and cytology of marine and freshwater algae. *Three Class Hours, Three Laboratory Hours.* (Not offered in 1971-1972).

307. Human Physiology. *Spring* (3) Staff. *Prerequisites: Biology 101, 102 are suggested.*

Detailed study of the manner in which different organ systems of the human body function. *Two Class Hours, Three Laboratory Hours.*

An elective course not applicable towards the minimum requirements for concentration in Biology.

308. Human Anatomy. *Fall* (3) Staff.

Gross and histological study of the human organism with particular emphasis on the neuro-muscular systems as related to physical and health education. *Two Class Hours, Three Laboratory Hours.*

An elective course not applicable towards the minimum requirements for concentration in Biology.

314. Biological Evolution. *Fall* (3) Mr. Brooks. *Prerequisites: Biology 101, 102, one other biology course. Introductory Chemistry and Mathematics are recommended.*

Principles of biological evolution: detailed discussion of natural selection, sources of variation, population genetics, isolating mechanisms, speciation and human evolution.

401. Genetics. *Fall and Spring* (4) Mr. Baldwin and Miss Speese, *Fall Semester; Mr. Grant, Spring Semester. Prerequisites: Biology 101, 102; knowledge of chemistry recommended.*

Principles of heredity, variation, and evolution; hybridization experiments; preparation of chromosomes. *Three Class Hours, Six Laboratory Hours.*

402. Cytogenetics. *Spring* (4) Miss Speese. *Prerequisite: Biology 401.*

Components of cells as related to genetics. Preparation and study of chromosomes. *Two Class Hours, Six Laboratory Hours.*

***†403. Problems in Biology.** *Fall and Spring* (Credit to be arranged) Staff.

Supervised projects selected to suit the needs of the individual student. *Hours to be arranged.*

404. Topics in Biology. *Fall and Spring* (2-4 credits arranged) Staff. *Prerequisites: Biology 101, 102.*

Areas of special current research interest presented by resident and visiting faculty members as opportunity and demand arise. *Hours arranged.*

405. Cellular Physiology. *Fall* (4) Mr. Black. *Prerequisites: Biology 101, 102; Chemistry 201, 202.*

The relationships between submicroscopic anatomy and chemistry of the cells are explored. Experiments dealing with cell-chemistry, permeability, metabolism, and growth are performed. *Three Class Hours, Six Laboratory Hours.*

406. Experimental Embryology. *Spring* (4) Mr. Black. *Prerequisites: Biology 101, 102; Chemistry 201, 202.*

Lectures and experiments dealing with the mechanisms of fertilization, cleavage, gastrulation, and organ-differentiation in both invertebrates and vertebrates are given. *Three Class Hours, Six Laboratory Hours.*

407. General Ecology. *Fall* (4) Mr. Ware. *Prerequisites: Biology 101, 102; a course in plant taxonomy, vertebrate zoology, or invertebrate zoology recommended.*

Discussion of interactions between organisms and their environment; factors controlling structure, function, and distribution of populations, communities, and ecosystems; survey of major biotic communities. *Three Class Hours, Three Laboratory Hours.*

408. Mammalian Physiology. *Fall* (4) Mr. Callard. *Prerequisites: Biology 101, 102 and Chemistry 201, 202; Physics 101, 102 recommended.*

The function of the animal as a whole as indicated by the physiology and interrelationships of different organs and organ systems. *Three Class Hours, Four Laboratory Hours.*

410. Animal Behavior. *Fall* (3) Mr. Terman. *Prerequisites: Biology 101, 102; Psychology 201, 202 recommended.* (Not offered in 1971-1972.)

Description of the known behavior patterns of selected invertebrate and vertebrate groups with emphasis on adaptive significance. The genetics, ontogeny and ecological significance of behavior patterns will be presented where known.

411. Developmental Biology. *Fall* (3) Mr. Simons. *Prerequisites: Biology 202 and Chemistry 202.*

A consideration of the differentiation of cells and organelles in terms of their molecular organization and functional activities.

412. Biology of the Vascular Plants. *Spring* (4) Mr. Hall.

A study of the major families of vascular plants, emphasizing comparative morphology and evolutionary trends, ecological relationships, economic importance, classification, and research methods.

414. Biochemistry. *Spring* (3) Mr. Vermeulen. *Prerequisites: Mathematics 103; Chemistry 201, 202 or permission of instructor.*

A study of the molecular bases of living processes: The chemistry of the important constituents of living matter; energy metabolism; enzyme kinetics; thermodynamics; biosynthesis; metabolic control.

415. General Endocrinology. *Fall* (4) Mr. Callard. *Prerequisites: Biology 101, 102; Biology 201 is recommended.*

The role of hormones in the maintenance of homeostasis, control of metabolic processes, and reproduction as exemplified by mammals. This course is intended as an introductory course and is a prerequisite for Comparative Endocrinology. *Three Class Hours, Three Laboratory Hours.*

416. Introduction to Ornithology. *Spring* (4) Mr. Byrd. *Prerequisite: Biology 102.*

Introduction to the biology of birds, lecture and laboratory work on morphology, classification, migration, distribution, and breeding biology; field work on identification and general ecology. *Three Class Hours, Six Laboratory Hours.*

417. Biostatistics. *Fall* (4) Mr. Van Winkle. *Prerequisites: Biology 101, 102; one year of college mathematics.*

An introduction to the design, analysis, and interpretation of experiments. Intended for students with research projects dependent on the use of observed data from planned experiments. *Three Class Hours, Three Laboratory Hours.*

418. Experimental Biochemistry I. *Spring* (2) Mr. Vermeulen. *Prerequisite or co-requisite: Biology 414 or Biology 405 or consent of the instructor.*

An introduction to experimentation with biochemical systems, processes, and compounds of biochemical importance; identification and quantitative measurements of such constituents and of biological transformations. *Six Laboratory Hours.* (Not offered 1969-70).

419. Plant Physiology. *Spring* (4) Mr. Mathes. *Prerequisites: Biology 101, 102; recommend Chemistry 201, 202.*

Mechanisms of absorption, translocation, synthesis and utilization of materials. The role of internal and external factors in plant growth. *Three Class Hours, Four Laboratory Hours.*

420. Senior Seminar. *Fall and Spring* (1,1) Staff.

Discussions by the faculty and advanced students of contemporary problems in biology. Seniors will be required to prepare and to present papers. Guest lecturers will present occasional seminars.

422. Cell Structure and Function. *Spring* (4) Mr. Scott. *Prerequisites: Biology 101, 102; Chemistry 201 recommended.*

Lectures and laboratories deal principally with the morphology of the cell and the preparation of materials for cytological study. An introduction to submicroscopic anatomy, chemistry, and the physiology of the cell is given. *Three Class Hours, Three Laboratory Hours.*

424. Introduction to Radiation Biology. *Spring* (3) Mr. Aceto.

A study of the biological effects of radiation. Interaction of radiation with matter, basic mechanisms of radiation injury, biological manifestations of radiation damage.

495-496. Honors. *Fall and Spring* (3,3) Staff.

Honors is independent study for superior students in Biology. It consists of readings in the field of the student's interests with emphasis on the original literature, the preparation and presentation of an Honors Essay based on the student's own research, and satisfactory completion of a comprehensive examination in the subject area of the research. *Hours to be arranged.*

MASTER OF ARTS DEGREE IN BIOLOGY

Requirements for the Degree of Master of Arts in Biology

The candidate for the degree of Master of Arts in Biology must meet the following requirements in addition to the general requirements on page 106.

1. After consultation with the Biology Department, the student may be required to take undergraduate courses in which his preparation is considered inadequate.
2. The student must demonstrate a reading knowledge of either French, German, or Russian, in the subject matter of Biology.
3. Each graduate student shall have a major Professor and Graduate Committee who will be responsible for supervising his thesis and for planning his program.
4. Each candidate must complete an oral comprehensive examination covering his thesis, his major subjects, and matters of general nature pertaining to his field of study. This comprehensive examination shall be given only after the thesis has been submitted to and approved by the examining committee and only after the 24 semester credits have been completed, or in the semester in which these credits will be completed.
5. A minimum residence period of one calendar year is required.
6. In addition to Biology 560 (Thesis), the candidate must successfully complete 24 semester hours of courses, of which at least one-half are in courses numbered 500 or above, with a grade average of "B" or better. Upon the approval of his graduate committee, a student may take advanced courses in the Departments of Chemistry, Physics, Mathematics, Psychology, and Marine Science. All courses below the 500 level taken for graduate credit must be completed with a grade of "B" or better.

GRADUATE COURSES

502. Experimental Plant Ecology. *Spring (4) Mr. Ware. Prerequisites: courses in plant physiology and plant taxonomy, or consent of instructor. Genetics and general or plant ecology are recommended.*

Consideration of environmental factors, and responses of plants to them, as they affect species abundance and distribution, natural selec-

tion, and plant community structure. *Two Class Hours, Six Laboratory Hours.* (Not offered in 1971-72.)

505. Topics in Cell Biology. *Fall* (3) Mr. Black. (Not offered 1969-70).

506. Developmental Mycology. *Spring* (3) Mr. Coursen. *Prerequisites: a course in organic chemistry and in introductory botany or consent of the instructor.*

An examination of the physiological and biochemical mechanisms associated with the morphological development of selected fungi.

509. Population Genetics. *Fall* (3) Mr. Grant. *Prerequisites: a course in genetics; statistics and ecology are recommended.*

Basic theory of population and quantitative genetics will be explored with the primary objective of understanding the genetic structure of populations and the processes of evolution.

510. Biosystematics. *Fall* (3) Mr. Hall. *Prerequisites: a course in taxonomy and in genetics or evolution is recommended.*

511. Ecology of Natural Populations. *Fall or Spring.* (3) Mr. Terman. *Prerequisites: a course in ecology and a course in psychology.*

512. Concepts of Synecology. *Spring* (3) Mr. Ware. *Prerequisites: a course in plant taxonomy and general or plant ecology, or consent of instructor.*

A survey of historical and modern concepts of the structure, development, and dynamic nature of natural communities; discussions of the origin and history of climax communities of North America.

513. Experimental Electron Microscopy. *Spring* (3) Mr. Scott.

Preparation of biological material for examination with the electron microscope and interpretation of ultrastructure. *One Class Hour, Six Laboratory Hours.*

514. Topics in Evolution. *Fall* (3) Mr. Brooks. (Not offered in 1971-72).

515. Chemical Regulation of Plant Growth. *Fall* (3) Mr. Mathes. *Prerequisites: Biology 101, 102; Chemistry 201, 202.*

The control of plant growth and development as influenced by a number of artificial and natural growth regulators. Various aspects of plant growth are discussed with emphasis on the mode of action of

regulatory materials. *Two Class Hours, Three Laboratory Hours.* (Not offered 1969-70).

517. Problems in Biology. *Fall and Spring* (credits to be arranged) Staff. *Prerequisites: Consent of Departmental Graduate Committee. Hours to be arranged.*

518. Comparative Endocrinology. *Fall* (credits to be arranged) Mr. Callard. *Prerequisite: Biology 415 or permission of instructor.*

Detailed study of selected areas of endocrinology. *Two Class Hours, Laboratory Hours to be arranged.*

***519. Herpetology.** *Fall* (4) Mr. Brooks.

A study of the taxonomy, ecology and zoogeography of the reptiles and amphibians of the world. *Two Class Hours, Six Laboratory Hours.* (Offered on Demand.)

520. Environmental Physiology. (Jointly with Marine Science 520). *Spring* (3) Miss Mangum. *Prerequisite: an acceptable course in physiology.*

Physiology of adaptation to variable factors in the environment. Emphasis given to cold-blooded animals.

522. Environmental Physiology Laboratory. (Jointly with Marine Science 522). *Spring* (2) Miss Mangum and Mr. Van Winkle. *Four Laboratory Hours.*

524. Design of Experiments. *Spring* (3) Mr. Van Winkle. *Prerequisite: Biology 417 or equivalent.*

Fundamental principles of experimental design; nested, block, and factorial designs; expected mean squares; confounding; response surface methodology.

526. Chemical Embryology. *Spring* (4) Mr. Black. *Prerequisites: Biology 405 or 414 or equivalent.*

Biochemical phenomena associated with oogenesis, fertilization, cleavage and latter development will be studied. *Three Class Hours, Six Laboratory Hours.*

527. Topics in Plant Physiology. *Spring* (4) Mr. Mathes. *Prerequisites: Biology 101, 102; recommend Chemistry 201, 202.*

Selected topics in plant physiology with emphasis on the environmental factors which influence the growth of plants. *Class and Laboratory Hours to be arranged.*

***528. Experimental Biochemistry II.** *Spring* (3) Mr. Vermeulen.
Prerequisites: Biology 414, 418 or the equivalent.

Advanced experiments on the isolation, purification, and analysis of biological material. Methods of studying constituents of biological systems; their degradation and characterization of intermediates. *Nine Laboratory Hours.* (Taught on demand).

530. Topics in Biology. *Fall and Spring.* (Credits to be arranged). Staff.

Areas of special current research interest presented by resident and visiting faculty members as opportunity and demand arise. (*Hours to be arranged*).

560. Thesis. *Fall and Spring* (Credit to be arranged). Staff. (*Hours to be arranged.*)

Chemistry

PROFESSORS TYREE (*Chairman of the Department*), ARMSTRONG, HILL, AND SYKES.¹ ASSOCIATE PROFESSORS DJORDJEVIC, KIEFER, AND THOMPSON. ASSISTANT PROFESSORS COLEMAN, KRANBUEHL, ORWOLL, AND SCHIAVELLI. INSTRUCTOR KATZ.

REQUIREMENTS FOR CONCENTRATION

The minimum number of semester credits required for concentration in chemistry is 36 and must include Chemistry (101, 102) or 115 or Freshman Seminar in Chemistry; 201, 202; 301, 302; 303, 304. German, French or Russian is to be taken in satisfaction of college foreign language requirement. A reading knowledge of German is highly desirable. Chemistry 201, 202 should be taken in the sophomore year.

It is the intention of the Department to offer seminar sections of elementary chemistry starting during the 1971-72 session. Such seminar courses will be limited to 15 students each and will be designed for those students expressing an especial interest in chemistry.

The Department is listed among those approved by the Committee on Professional Training of the American Chemical Society and those graduates who have met certain minimum standards established by said Committee may be certified for recognition by the Society as having an ACS Certified BS in Chemistry. To meet such standards, a reading knowledge of scientific German is required. Certain advanced courses in Chemistry are also required which are chosen in consultation with the Chairman of the Department.

DESCRIPTION OF COURSES

101-102. Elementary General Chemistry. *Fall and Spring (4,4) Staff.*

An introduction to the study of the common non-metallic and metallic elements with emphasis upon chemical laws and the development and application of chemical principles. *Three class hours, four laboratory hours.*

115. Principles of Chemistry. *Fall (4) Mr. Kiefer.*

For exceptionally well prepared students. Covers the subject matter of Chemistry 101-102 in one semester. *Three class hours, four laboratory hours.*

¹ Visiting Professor, 1970-71.

201-202. Organic Chemistry. *Fall and Spring (4,4)* Messrs. Coleman, Hill and Schiavelli. *Prerequisite: Chemistry 102 or 115.*

Chemistry of the various organic compounds. Reactivity is correlated with electronic and three-dimensional aspects of compounds of carbon. *Three class hours, five laboratory hours.*

301-302. Introductory Physical Chemistry. *Fall and Spring (4,4)* Messrs. Kranbuehl and Orwoll. *Prerequisites: Physics 102 and Math 202. Prerequisite or Corequisite: Chemistry 303.*

The states of matter, thermodynamics, chemical equilibrium, electrochemistry, chemical kinetics, quantum chemistry, and photochemistry. *Three class hours, four laboratory hours.*

303. Quantitative Analysis. *Fall and Spring (4)* Mr. Armstrong and Mrs. Djordjevic. *Prerequisite: Chemistry 102 or 115.*

Volumetric and Gravimetric analysis. *Two class hours, six laboratory hours.*

304. Instrumental Analysis. *Spring (4)* Mrs. Djordjevic and Mr. Kiefer. *Prerequisite: Chemistry 303.*

Principles and applications of instruments to chemical analysis. *Two class hours, six laboratory hours.*

(Students registering for Chemistry 302 will register for Chemistry 404 in lieu of 304, during the 1970-71 session.)

305. Inorganic Chemistry. *Fall (3)* Mrs. Djordjevic. *Prerequisite: Chemistry 102 or 115.*

Systematic study of the properties and reactions of chemical elements and their inorganic compounds.

401. Advanced Physical Chemistry. *Fall (3)* Mr. Kranbuehl. *Prerequisite: Chemistry 302.*

Introduction to theoretical chemistry, quantum mechanics, molecular spectroscopy, and statistical mechanics.

402. Advanced Inorganic Chemistry. *Spring (3)* Mr. Thompson. *Prerequisite or corequisite: Chemistry 302.*

Principles of physical chemistry and quantum mechanics applied to the study of the structures and reactions of inorganic substances.

403. Advanced Organic Chemistry. *Fall* (3) Mr. Schiavelli. *Prerequisite: Chemistry 202. Prerequisite or corequisite: Chemistry 302.*

A structure-reactivity approach to reaction mechanisms, applications of spectroscopic methods to structural analysis and modern synthetic chemistry.

404. Instrumental Methods of Analysis. *Spring* (3) Mrs. Djordjevic and Mr. Thompson. *Prerequisite or Corequisite: Chemistry 302.*

Principles and applications of instruments to chemical analysis. *Two class hours, four laboratory hours.*

405. Modern Laboratory Techniques. *Fall* (3) Messrs. Schiavelli and Thompson. *Prerequisite: Chemistry 304 or equivalent.*

A Laboratory course providing exposure to modern experimental techniques in all areas of chemistry. *One class hour, six laboratory hours.*

406. Radiochemistry. *Spring* (3) Mr. Kiefer. *Prerequisite or co-requisite: Chemistry 302.*

A study of radioactive decay; interaction of radiation with matter; nuclear structure; nuclear reactions; radiochemical techniques.

409. Introduction to Chemical Research. *Fall and Spring* (hours to be arranged; credits according to the work accomplished). Staff.

A course for the advanced student affording an opportunity for individual work on a problem under the supervision of an individual faculty member.

MASTER OF ARTS DEGREE IN CHEMISTRY

Admission and Requirements

In addition to meeting those requirements for admission to graduate study as outlined on pp. 106-109 and for the degree of Master of Arts (p. 106), a candidate for the degree of Master of Arts in Chemistry

- a) shall make a selection of graduate courses under the guidance of a departmental advisor; undergraduate courses may have to be taken or repeated in those areas where adequate preparation appears to be lacking;

- b) must attend the Graduate Seminar during each semester in residence;
- c) must demonstrate a reading knowledge, in the field of chemistry, in French, German, or Russian at least one semester prior to qualifying for the degree;
- d) must acquire at least twelve semester credits (with a minimum of six credits in chemistry) in 500 level courses;
- e) must prepare a thesis based upon research carried out under the guidance of a staff member;
- f) must pass a comprehensive examination based upon the entire work done for graduate credit and after approval of the thesis by an examining committee.

GRADUATE COURSES

501. Chemistry of Macromolecules. *Fall* (3) Mr. Orwoll. *Prerequisite: consent of the instructor.*

502. Topics in Physical Chemistry. *Spring* (3) Mr. Kranbuehl. *Prerequisite: Chemistry 401 or equivalent.*

503. Topics in Nuclear Chemistry. *Fall* (3) Mr. Kiefer. *Prerequisite: Chemistry 406 or equivalent.*

504. Topics in Inorganic Chemistry. *Spring* (3) Messrs. Thompson and Tyree, and Mrs. Djordjevic. *Prerequisite: Chemistry 302 or equivalent.*

507. Chemistry of Natural Products. *Fall* (3) Mr. Hill. *Prerequisite: Chemistry 403 or equivalent.*

508. Topics in Organic Chemistry. *Spring* (3) Mr. Hill. *Prerequisite: Chemistry 202.*

†509. Research. *Fall and Spring* (hours to be arranged) Staff.

A maximum of 6 credits may be applied toward the M.A. degree course requirements. Graded "S" (Satisfactory) or "F" (Fail).

†510. Graduate Seminar. *Fall and Spring* (1,1) Staff.

A maximum of three seminar credits may be applied toward the M.A. degree course requirements. Seminar credits may not be counted toward the minimum of six credits in 500 level Chemistry courses.

†560. Thesis. *Fall and Spring* (hours to be arranged) Staff.

Classical Studies

PROFESSOR JONES (*Chairman of the Department*). ASSOCIATE PROFESSOR
LEADBEATER. ASSISTANT PROFESSORS MACGREGOR AND REILLY.

REQUIREMENTS FOR CONCENTRATION

A candidate for the A.B. degree with concentration in Classical Studies will be expected to take at least 30 credits in Greek and Latin courses, with the majority of these credits in one of the two languages. If the major emphasis is on Greek, at least 6 credits of Latin should be taken; if the major emphasis is on Latin, at least 6 credits of Greek should be taken. Normally the student will be expected to take at least one course in the language of concentration during each semester of the junior and senior years. All concentrators in Classical Studies are also advised to pursue over a period of years the study of a modern foreign language.

The Department of Classical Studies offers freshman seminars, conducted in English, in the general area of Classical Civilization (See below, p. 132).

DESCRIPTION OF COURSES

101-102. Elementary Greek. *Fall and Spring* (4,4) Mr. Leadbeater.

The elements of the Greek language with translation of stories and poems from selected readers. Parallel study of aspects of Greek civilization and of the legacy left by Greek culture and thought to the modern world.

201. Introduction to Greek Literature: Prose. *Fall* (3) Mrs. Reilly. *Prerequisite: Greek 102.*

A course designed to introduce the student to the basic syntactical and stylistic elements of 5th-4th cent. B.C. Attic prose through an intensive examination of selected works of Plato, Lysias, and Thucydides. Emphasis will be placed on literary techniques and the comprehension and appreciation of Greek in Greek rather than in English.

202. The Literature of Greece: Prose and Poetry. *Spring* (3) Mrs. Reilly. *Prerequisite: Greek 201.*

Continued analysis of the style, compositional techniques and content of representative prose writers, such as Plato, Aristotle, Herodotus, and Xenophon. In the second half of the semester the student will be

introduced to the form and content of dramatic poetry through the reading of one of the tragedies of Sophocles or Euripides.

***Greek Literature Cycle.** *Fall or Spring* (3) Mr. Leadbeater.
Prerequisite: Greek 202 or permission of the instructor.

Courses in the 400 group when supplemented by additional parallel reading may be counted toward the M.A. degree.

- 301. Philosophy—Plato.
- 302. New Testament—The Gospels, Acts and Epistles.
- 303. Homer—Selections from *Iliad* and *Odyssey*.
- 403. Historians—Herodotus, Thucydides.
- 404. Lyric Poetry.
- 405. Greek Tragedy—Aeschylus, Sophocles, Euripides.
- 406. Greek Comedy—Aristophanes and Menander.

LATIN

101-102. Elementary Latin. *Fall and Spring* (4,4) Mr. Leadbeater.
Students who have acquired two high school units in Latin may not take Latin 101, 102 for credit.

This course is designed to equip the student with a mastery of the structure of the Latin language and with a knowledge of basic vocabulary. There are translations from appropriate Latin texts and parallel study of pertinent aspects of Roman life and history.

201, 202. Introduction to Latin Prose and Poetry. *Fall and Spring* (3,3) Mrs. Reilly. *Prerequisite:* at least two units of high school Latin or Latin 101, 102.

Note: A student who has had three years of Latin in high school and read Latin prose in the third year may not take Latin 201 for credit, but may take Latin 202. A student who has had three years of Latin in high school and read Latin poetry in the third year may not take Latin 202 for credit, but may take Latin 201. A student who has had four years of Latin in high school may take neither Latin 201 nor Latin 202 for credit.

In the first semester (201) there is a review of the elements of the language and the reading of passages from selected authors with emphasis upon Cicero with parallel study of the history and institutions

of Republican Rome. In the second semester (202) there is reading of selected books of Vergil's *Aeneid* with parallel study of the history and institutions of the Empire and of the epic and its influence upon subsequent literature.

249-250. Literature of the Republic and the Empire. *Fall and Spring* (3,3) Mr. Jones. *Prerequisite: three or four units of high school Latin or Latin 201, 202.*

The reading of selections representative of the works of the important writers in the periods of the Republic and Empire. The aim of the course is to help the student comprehend the total Roman achievement over a long span of time in the literary field.

***Latin Literature Cycle.** *Fall or Spring* (3) Mr. Jones and Staff. *Prerequisite: Latin 249-250 or equivalent.*

Courses in the 400 group may be counted toward the M.A. degree when supplemented by additional parallel reading.

301. Cicero's and Pliny's *Letters*.

302. Catullus and the Elegiac Poets.

303. Cicero's *Orations*.

304. Horace's *Odes* and Martial's *Epigrams*.

305. Roman Comedy: Plautus and Terence.

307. Roman Private Life.

308. Critical Studies in Caesar.

310. Medieval Latin. Selections from prose and poetry.

401. Horace's *Satires* and *Epistles*.

402. The Latin Historians.

403. Cicero's Philosophical Works.

404. The Latin Epic: Vergil, or Lucretius.

405. The Teaching of High School Latin. Same as Education S305. Development of the Latin curriculum, methods of presentation, audio-visual aids, materials.

406. Silver Latin Satire: Juvenal or Petronius.

410. Experimental Workshop in Latin. Review and evaluation

of innovative Latin curricula of selected school systems. Production of new materials for use at the elementary level of Latin study.

500. Special Topics. *Fall or Spring* (3) Staff.

Courses of distinctly graduate character. Open from time to time to such candidates for the M.A. degree as are prepared to carry on individual study and research.

A. Seminar in Greek Literature. Intensive study of individual Greek authors or genres, varying from year to year in accordance with the students' needs;

B. Seminar in Latin Literature. Intensive study of individual Latin authors or genres, varying from year to year in accordance with the students' needs;

C. Satire and the Novel;

D. Palaeography;

E. Problems of Textual Criticism.

CLASSICAL CIVILIZATION

The following courses are offered as being of general cultural value and valuable contributions to the Humanities program of the College. *A knowledge of Latin and Greek is not required.* Some of these courses may be counted to the extent of six semester credits on a concentration in Latin or Greek, but will not absolve the language requirements for a degree. Courses numbered in the 200's are open to *all* students of the College. Courses numbered in the 300's and 400's are open to *sophomores, juniors, and seniors.*

Greek-Latin 150. Freshman Seminar. *Fall and Spring* (3) Staff.

Greek-Latin 205. Greek and Roman Mythology. *Fall or Spring* (3) Mr. MacGregor.

The Greeks and the Irrational. Study of the common heroic and divine myths, with reference to the social matrix, various interpretations, and parallel developments in other societies. No previous knowledge of ancient civilization is required.

Greek-Latin 207. Greek Literature. *Fall* (3) Mr. MacGregor.

From Hero to Citizen. Reading and analysis of literature down to Alexander, with emphasis on the change from heroic and anthro-

pomorphic ideals to the anti-heroism and submergence of the individual into the world-empire.

Greek-Latin 208. Latin Literature. *Spring* (3) Mr. MacGregor.

From homestead to court. Reading and analysis with emphasis on the transition from republic to empire, and the consequent change from practical oratory to propaganda or to the artificialities of literary escapism.

Greek-Latin 217. Greek Archaeology and Art. *Fall* (3) Mrs. Reilly.

An archaeological consideration of the Minoan, Mycenaean, Archaic and Classical periods of Greek civilization. Architecture, sculpture, painting and the minor arts are included.

Greek-Latin 218. Roman Archaeology and Art. *Spring* (3) Mrs. Reilly.

The architecture, painting and sculpture of Hellenistic Greece and of Rome until the 4th c. AD. from the archaeological viewpoint. Byzantine art as found in Greece and Italy will also be included.

Greek 311-Latin 312. *Fall and Spring* (3,3) Mr. Jones.

Ancient Civilization from prehistoric times to the downfall of the Roman Empire. The first semester deals with the ancient Orient and Greece; the second semester with Rome. This course is the same as History 301, 302.

Greek-Latin 401. Greek and Latin Epic. *Fall or Spring* (3) Mr. Leadbeater.

Careful reading, in English, of Homer's *Iliad and Odyssey*, Vergil's *Aeneid*, Lucan's *Pharsalia*. Discussion of the character and structure of the Classical epic and its influence on European epic and novel.

Greek-Latin 402. Greek and Latin Lyric Poetry. *Fall or Spring* (3) Mr. Leadbeater.

Devoted to the study, in translation, of the major Classical lyric poets who have influenced the development of this genre in subsequent literary history. Parallel readings in theories of lyric poetry and of selected poems showing the influence of Classical lyric forms.

Greek-Latin 403. Classical Tragedy and Its Influences. *Fall or Spring* (3) Mr. Leadbeater.

Readings, in English, and discussion of the major works of Aeschylus, Sophocles, Euripides, and Seneca. Parallel readings in the theories of tragedy and of representative works, illustrating the influence of Classical Tragedy on subsequent literary history.

Greek-Latin 404. Ancient Comedy and Its Influences. *Fall or Spring* (3) Mr. Leadbeater.

A study, in translation, of representative works of Aristophanes, Menander, Plautus, and Terence. Parallel readings in the theories of comedy and of representative works illustrating the influence of Ancient Comedy on subsequent literary history.

Greek-Latin 405. Later Greek Philosophy. *Fall or Spring* (3) Mr. Leadbeater.

A study of the later aspects of Greek philosophy as they took form in Neo-Platonism and the Second Sophistic Movement. The course is intended to be an examination of Platonism as it developed in the philosophies of Plotinus, Iamblichus, Julian, and others. Emphasis will be placed on the mysticism of the age and the reaction of and influence on Christian thought as revealed in selected readings from the Church Fathers.

HONORS STUDY

495, 496. Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Honors Study in Classical Studies will be enrolled in this course during both semesters of their senior year. The course comprises: (a) reading and discussion of selected authors in the language of the student's emphasis, Greek or Latin; (b) supervised reading of a special bibliography in the field of the student's major interests; (c) satisfactory completion by May 1, of a scholarly essay; and (d) a satisfactory completion of a comprehensive oral examination in the field of Greek and Latin Literature.

Economics

PROFESSOR SCHIFRIN (*Chairman of the Department*). ASSOCIATE PROFESSORS GARRETT AND MATTHEWS. ASSISTANT PROFESSORS BAKER, BARRY, BUNCE, COUSINS, HAULMAN,¹ AND MOODY.²

REQUIREMENTS FOR CONCENTRATORS

Concentration in Economics requires a minimum of thirty semester hours of courses in Economics beyond Economics 201, 202. All concentrators are required to take the following courses:

- 303 Intermediate Economic Theory: Microeconomics
- 304 Intermediate Economic Theory: Macroeconomics
- 307 Principles and Methods of Statistics

Special programs may be arranged in which these required courses can be waived by permission of the Department.

The Department offers as Freshman Seminars introductory courses on contemporary economic issues and problems.

DESCRIPTION OF COURSES

150. Freshman Seminar. *Fall and Spring* (3) Staff.

A survey of selected contemporary economic issues and problems, with an introduction to the methods of economic analysis useful in understanding them.

201, 202. Principles of Economics. *Fall and Spring* (3,3) This course is a prerequisite to all courses in Economics except 307. Staff.

An introduction to the analytical tools commonly employed by economists in the study of the determination of the composition of output, prices, and the aggregate level of economic activity. Problems related to these subjects are considered, and alternative courses of public policy are evaluated.

303, 304. Intermediate Economic Theory. *Fall and Spring* (3,3) Mr. Barry and Mr. Bunce. *Prerequisite: Econ. 201, 202.*

The first semester is devoted to the theory of resource allocation in a market economy. The second semester is devoted to the theory of national income determination.

¹ On leave of absence second semester 1971.

² Visiting Assistant Professor, 1970-71.

307. Principles and Methods of Statistics. *Fall and Spring* (3) Mr. Garrett.

A study of the principles and uses of frequency distribution, measures of central tendency and dispersion, statistical inference, sampling, correlation and regression analysis. *Two class hours, two laboratory hours.*

311. Money and Banking. *Fall* (3) Mr. Barry and Mr. Haulman. *Prerequisite: Econ. 201, 202.*

An analysis of the monetary system with emphasis upon determinates of the money supply and the relationship between money and economic activity.

412. Stabilization Policy. *Spring* (3) Mr. Matthews. *Prerequisites: Econ. 201, 202, 304 or 311.*

Analysis of stabilization policy with emphasis on the joint impact of monetary and fiscal policies with respect to the objectives of full employment, economic growth, and price stability.

421. Public Finance. *Fall* (3) Mr. Baker. *Prerequisites: Econ 201, 202, 303.*

Theory and principles of public finance, with emphasis on federal, state, and local taxes and expenditures, the fiscal decision process, intergovernmental fiscal relations, and public debt.

431. Introduction to Mathematical Economics I. *Fall* (3) Mr. Moody. *Prerequisites: Econ. 201, 202.*

A survey of mathematical techniques widely used in economics including topics in set theory, linear algebra, linear programming and game theory. Emphasis will be on the economic applications of these methods.

432. Introduction to Mathematical Economics II. *Spring* (3) Mr. Moody. *Prerequisites: Econ. 201, 202, 431.*

The topics covered in this course are selected from among differential and integral calculus, optimization techniques and differential equations, with emphasis on the economic content and application of the techniques.

440. Economic History of the Western World. *Fall* (3) Mr. Cousins. *Prerequisites: Econ. 201, 202, or permission of instructor.*

A study of the development of the market and semi-market economies of the western world from preindustrial times through the early industrial periods. Also included is a comparative study of the growth of these economies through the nineteenth and twentieth centuries.

441. American Economic History. *Spring* (3) Mr. Cousins. *Prerequisites: Econ. 201, 202, or permission of instructor.*

A study of the growth of the American economy from the colonial period to the present. Special emphasis is placed on the use of quantitative methods in the study of economic history.

444. Regional Economic Growth and Planning: Emphasis on the South. *Spring* (3) Mr. Garrett. *Prerequisites: Econ. 201, 202.*

A study of regional economic development with emphasis on the South. The course includes an analysis of systems of cities, metropolitan areas and small urban areas as separate subregions and their role in the contemporary growth of larger regions. Models of regional growth and institutionalism are combined to provide a better perspective for regional planning.

446. History of Economic Thought. *Fall* (3) Mr. Haulman. *Prerequisites: Econ. 201, 202.*

The development of economic analysis with emphasis upon Classical and Marxian economics.

451. Labor Economics. *Fall* (3) Mr. Schiffrin. *Prerequisites: Econ. 201, 202.*

A study of public policy in labor-management relations, with special emphasis upon contemporary problems such as: emergency dispute settlement; automation; union growth; and wage-price guide-lines.

452. Labor Movements. *Spring* (3) Mr. Schiffrin. *Prerequisites: Econ. 201, 202, or permission of instructor.*

An analysis of the origins, characteristics, and ideologies of the labor movements of the United States, Great Britain, and other industrialized countries, stressing comparisons and contrasts among them.

461. Government and Business: The Enforcement of Competition. *Fall* (3) Mr. Baker. *Prerequisites: Econ. 201, 202.*

An analysis of the factors that influence and determine business conduct and market performance. Special emphasis is given to the philos-

ophy and features of the anti-trust laws and to the enforcement of market competition through their application.

462. Government Regulation of Business. *Spring* (3) Mr. Baker. *Prerequisites:* *Econ. 201, 202.*

An analysis of the principles and purposes of government regulation of business in certain sectors of the economy where competition may not be workable, including public utilities, transportation, agriculture, defense procurement, and scientific research and development.

471. International Economics. *Fall* (3) Mr. Matthews. *Prerequisites:* *Econ. 201, 202.*

This course develops the theory of international trade from the Mercantilists to the modern economists. The objective is to give the student basic knowledge of analytical tools used by economists in the study of international economic problems.

472. International Trade and Policies. *Spring* (3) Mr. Matthews. *Prerequisites:* *Econ. 201, 202.*

This course analyzes historically problems in tariffs and other protectionist devices, the effect of economic development on the pattern of world trade, and problems in balance of payments equilibrium, foreign exchange, and international finance. Particular attention is focused on international economic developments since World War II.

473. Economic Development in Latin America. *Fall and Spring* (3) Mr. Bunce. *Prerequisites:* *Econ. 201, 202 or permission of instructor.*

A study of economic development focusing on the diverse experience and problems of Latin American countries. Consideration will be given to the cultural and other "non-economic" factors in economic development, including population growth, education, the Church, and community development, as well as to theories of inflation and to numerous aspects of international trade mechanisms.

482. Comparative Economic Systems. *Fall* (3) Mr. Cousins. *Prerequisites:* *Econ. 201, 202.*

Primarily a study of the development and present structure of the Soviet economy, with comparative analysis of the Soviet and Western experiences.

490. Topics in Government and Economic Policy. *Fall and*

Spring (3) Staff. *Prerequisites: Concentration in Economics, Senior standing and permission of instructor.*

A directed readings course conducted on an individual or group basis on various topics in economic policy.

Topics in Government and Economic policy may be same as Government 490.

495, 496. Honors. *Fall and Spring* (3) Staff.

Advanced study on a tutorial basis the first semester. In the second semester each student undertakes independent research on a selected topic and presents an Honors Essay. Each Honors student is responsible for (a) the supervised reading of a selected list of books in economics; (b) satisfactory completion by May 1 of an original essay, or other scholarly project in the field of economics; and (c) satisfactory performance on a comprehensive oral examination. A student who completes the Honors Essay but does not achieve Honors may be given credit for Economics 490.

English Language and Literature

PROFESSORS DOLMETSCH (*Chairman of the Department*), DAVIDSON, EVANS, JENKINS, McCULLEY, MCGHEE,³ NEIMAN,¹ AND SMITH. ASSOCIATE PROFESSORS BALL, DAVIS,² DONALDSON,¹ ELLIOTT, FEHRENBACH, NETTELS, AND WILLIS. ASSISTANT PROFESSORS CONLEE, DAW, FAMA, FREEMAN, GRINCHUK,⁴ MACCUBBIN, SAVAGE, AND SCHOLNICK. INSTRUCTORS ANDREWS, BAUER, BOELT, CORNETTE, CURTIN, HEACOX, LEE, MARLOW, MEYERS, PARSONS, PIKE, WALKER, AND WARREN. LECTURER MILLER.⁵

REQUIREMENTS FOR CONCENTRATION

A concentration in English requires 36 credits in departmental courses, at least 30 of which must be in courses numbered above 300. The first 36 credits counted toward concentration must include at least one English course numbered 201-300 and may not include more than two courses from among those numbered 150-300.

To ensure a balanced and representative program a concentrator must include, in his total of 36 credits, courses in designated areas, periods and types of literary study. Specifically his program must contain:

- I. A minimum of five courses (15 credits) in English or American Literature (409 to 463), of which at least three courses (9 credits) must be in English literature (409 to 452). These five courses shall include:
 - a. Two courses (6 credits) in one of the following combinations, representing the study at length of the literature of a period or genre: 409-410, 412-413, 423-424, 429-430, 431-432, 439-440, 441-442, 461-462, 462-463.
 - b. Two courses (6 credits) in English literature before 1660 (409 to 429). Only one course (3 credits) in Shakespeare (421 or 422) may be counted for this requirement. The combinations 409-410 or 423-424 will satisfy requirements (a) and (b) simultaneously.

¹ On leave of absence, 1970-71.

² On leave of absence, second semester, 1970-71.

³ Visiting Professor, second semester, 1970-71.

⁴ Visiting Assistant Professor, 1970-71.

⁵ Second semester, 1970-71.

- c. One course (3 credits) in Chaucer, Shakespeare, or Milton (413, 421, 422, or 426). Any one of these courses will satisfy half of requirements (b) simultaneously.
- II. One course (3 credits) in a seminar taken during the senior year. (Candidates for departmental honors, who must in addition take English 495, 496, will normally meet their seminar requirement in the second half of their junior year by enrolling in English 396.)
- III. Remaining courses (for a minimum of 36 credits) selected from the department's offering above 300 in accord with the concentrator's interests and vocational expectations.¹

DESCRIPTION OF COURSES

INTRODUCTORY COURSES

001, 002. A Study of English as a Second Language. *Fall and Spring* (0,0) Mrs. Miller.

Designed for foreign students who have difficulty with oral and written expression. This course is intended to improve the student's pronunciation, understanding of grammar and syntax, and reading comprehension. There are graded readings in the sciences and the humanities.

101-102. Composition and Literature. *Fall and Spring* (3,3) Staff.

The course aims to develop (1) the student's ability to use expository prose as an instrument of thought and expression, and (2) his understanding of the nature of literature and his ability to read with accuracy and judgment. The course emphasizes close reading and discussion, orally and in writing, of works illustrative of some major literary genres.

101H-102H. Composition and Literature. *Fall and Spring* (3,3) Staff.

English 101H, 102H is designed for the student with better than usual preparation. In general the course covers the same range as English 101, 102. The readings, class discussion, and writing continu-

¹ One semester of American Literature is required, and English 304 and either English 209 or 301 are strongly recommended for the Virginia Collegiate Professional Teaching Certificate.

ously emphasize the development of critical skills. Students are assigned by the Department of English to English 101H-102H on basis of the records submitted to the Dean of Admissions. This course satisfies the distribution requirement.

201, 202. Survey of English Literature. *Fall and Spring* (3,3) Staff.

A survey of English literature, with collateral readings, discussions and reports.

201H, 202H. Survey of English Literature. *Fall and Spring* (3,3) Staff.

English 201H, 202H is designed for the student of unusual proficiency. Admission to these sections is by recommendation of the coordinator of sophomore English. The course satisfies the distribution requirement.

209. Composition. *Fall and Spring* (3) Staff.

This course provides practice in writing different kinds of papers under supervision. Expository writing is stressed but there is opportunity for creative writing. Enrollment is limited and frequent individual conferences are provided.

(With exception of 001-002, the above-listed courses will not be offered in 1971-72. They will be replaced by new introductory courses to be announced in late Spring 1971. Among the new courses will be English 150, *Freshman Seminar*, a one-semester course with multiple sections, each exploring a different topic. Topics for these sections will be announced in time for incoming freshmen to preregister their choices).

ADVANCED COURSES

301. Critical Reading and Writing. *Fall and Spring* (3) Mr. Heacox and Mr. Meyers.

A study of contemporary critical approaches to literature, the close reading of selected works of literature, and the application of theory through the writing of critical papers. Five generally recognized approaches to criticism will be discussed: moral, sociological, psychological, archetypal, and textual or verbal criticism. (This course will not be offered in 1971-72.)

303. History of the English Language. *Fall* (3) Mr. Ball.

A study of the history of the English language from Anglo-Saxon to the present. Some attention is given to American English and English linguistics.

304. Modern Grammar. *Fall and Spring* (3) Mr. Ball, Mr. Conlee, and Mr. Fama.

An examination of structural grammar and transformational grammar. An introduction to the development of English grammar and language is provided.

***305, 306. Advanced Writing.** *Fall and Spring* (3,3) Mr. Jenkins.

The course is intended for the student who has demonstrated some talent for creative writing. He is encouraged to develop his individual interests and creative capacities. Extensive practice in the several types of writing. The course is conducted as a seminar; manuscripts are read and criticized informally by members of the class.

307. Major American Authors. *Fall and Spring* (3,3) Mr. Dolmetsch.

A study of six major American writers of the nineteenth and twentieth centuries. This course is especially designed for students who plan to take one semester only of American literature. (This course will not be offered in 1971-72.)

381. Epic and Romance. *Fall* (3) Staff.

Classical, medieval, and renaissance epic and romance with special emphasis on Vergil and Dante, as well as those English and continental figures who share or serve to illuminate their tradition. (Not offered 1970-71.)

382. Aspects of the European Novel. *Spring* (3) Mr. Meyers.

Extensive readings in major French, German and Russian fiction of the nineteenth and twentieth centuries, with some Scandinavian material.

396. Junior Honors Seminar. *Spring* (3) Miss Nettels.

A study in depth of a limited literary topic, emphasizing student discussion and the preparation of critical papers. This course is restricted to concentrators planning to enroll in Senior Honors, and is a substitute for the required senior seminar.

403. Introduction to Descriptive Linguistics. *Fall* (3) Mr. Fama.

A study of contemporary linguistic theory and methods of language analysis. Same as Anthropology 430.

***English 404. Introduction to Historical Linguistics.** *Spring* (3) Mr. Fama.

Survey of principles, methods and major results of Indo-European historical reconstruction. Consideration is given to the contributions of recent generative phonology to Indo-European. Some investigations into non-Indo-European reconstruction are also included. Same as Anthropology 440. (*Prerequisite: 403 or consent of instructor.*)

408. Literary Criticism. *Spring* (3) Staff.

Major texts in the tradition of literary criticism from Aristotle to modern times, tracing the history of critical concerns in relation to the history of ideas. (Not offered 1970-71.)

409. Old English. *Fall* (3) Mr. Davidson.

An introduction to Old English, including elementary grammar and phonology and the reading of prose and short poems; collateral readings in the history and culture of the period.

410. Beowulf. *Spring* (3) Mr. Davidson. *Prerequisite: English 409 or the permission of the instructor.*

Reading of *Beowulf* in Old English; collateral readings in criticism of the poem.

412. Medieval Literature. *Spring* (3) Mr. Davidson.

A survey of Old and Middle English literature exclusive of Chaucer.

413. Chaucer. *Fall* (3) Mr. Davidson and Mr. Conlee.

A study of Chaucer's *Canterbury Tales* and *Troilus and Criseyde*.

421. Shakespeare. *Fall* (3) Mr. Fehrenbach.

An intensive study of selected histories and comedies.

422. Shakespeare. *Spring* (3) Mr. Fehrenbach.

An intensive study of the major tragedies and the "problem" comedies.

423. The English Renaissance. *Fall* (3) Mr. Evans.

Sixteenth-century English literature, excluding the drama, with emphasis on Sir Philip Sidney and Edmund Spenser.

424. The Seventeenth Century. *Spring* (3) Mr. Evans.

Poetic traditions from Jonson and Donne to Marvell.

426. Milton. *Spring* (3) Mr. Savage.

An intensive study of Milton's poetry and prose, with due attention to the religious, political, and literary milieu in which Milton wrote.

429. English Drama to 1642. *Fall* (3) Mr. McCulley.

A study of drama in England, including conventions and currents of ideas, from the origins to the closing of the theatres in 1642, with emphasis on the works of Christopher Marlowe, Ben Jonson and John Webster.

430. English Drama since 1660. *Spring* (3) Mr. McCulley.

A study of English drama from 1660 to the present, with emphasis on Restoration comedy and dramatists from Shaw to the present; related continental plays, particularly those of Ibsen, will be studied. Intellectual implications and critical analysis of texts will be stressed.

431. English Literature, 1670-1744. *Fall* (3) Mr. Maccubbin.

Poetry, prose, and drama of Wycherley, Congreve, Dryden, Pope, Swift, Gay, and Fielding, with emphasis on satire and the cultural milieu.

432. English Literature, 1744-1798. *Spring* (3) Mr. Maccubbin.

Poetry of Thomson, Collins, Gray, Smart, and Cowper, with emphasis on the history of ideas; and the works of Dr. Johnson and his circle, especially Goldsmith, Reynolds, Gibbon, and Boswell.

439. English Novel to 1832. *Fall* (3) Mr. Smith.

Survey of the development of English prose fiction from its beginnings in the Elizabethan period through the novels of Austen.

440. English Novel to 1832-1900. *Spring* (3) Mr. Ball.

Survey of the English novel from Dickens to the early twentieth century.

441. The Romantic Period, 1798-1832. *Fall* (3) Mr. Elliott.

Dominant ideas and conventions of English romanticism as expressed

through major poets and critics of the period, especially Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats.

442. The Victorian Age. *Spring* (3) Mr. Elliott.

Emphasis is on the intellectual crises of the age as expressed primarily by leading poets and essayists from Carlyle to Hardy.

451. Modern Poetry. *Fall and Spring* (3) Mr. Jenkins and Mr. Willis.

Modern English and American poetry and its development, with reading, interpretation and discussion of the verse of Yeats, Pound, Eliot, Auden, Stevens, Thomas, and others.

452. Modern Fiction. *Fall and Spring* (3) Mr. Jenkins and Miss Nettels.

Reading, analysis and discussion of the principal American and British fiction writers from 1890 to the present, chosen to illustrate contemporary tendencies in matter and technique.

461. American Literature to 1850. *Fall and Spring* (3) Mr. Grinchuk.

The development of the American literary tradition from 1607 to 1850, emphasizing the works of such writers as Edward Taylor, William Byrd of Westover, Benjamin Franklin, Washington Irving, James Fenimore Cooper, and E. A. Poe. (Not offered Spring 1970.)

462. American Literature, 1850 to 1900. *Fall and Spring* (3) Mr. Scholnick.

A continuation of English 461, with emphasis upon the works of the Transcendentalists, Hawthorne, Melville, Whitman, "Mark Twain," Emily Dickinson, Henry James, and the Regionalists and realists of the post-Civil War era.

463. American Literature since 1900. *Fall and Spring* (3) Mr. Davis and Mr. Grinchuk.

A continuation of English 462, with considerable attention to the development of American drama from O'Neill to the present and to such other Twentieth Century authors as Dreiser, Hemingway, Faulkner, and Frost.

†475. Senior Seminar in English. *Fall and Spring* (3) Staff.

A study in depth of a limited literary topic. Students will write and present papers for critical discussion. Open only to seniors.

HONORS STUDY

†495-496. Honors. Fall and Spring (3,3) Staff.

Students admitted to Honors Study in English will be enrolled in this course during both semesters of their senior year. The course comprises (a) supervised reading in the field of the student's major interest; (b) the preparation and presentation by May 1 of an Honors Essay based on the student's own research; and (c) satisfactory performance in a comprehensive oral examination in the field of the student's major interest.

GRADUATE PROGRAM

Admission to graduate study in the College is conditional upon completion of the requirements for a baccalaureate degree in an accredited institution, with an over-all quality point average of at least 1.5 or the equivalent. Beyond this minimum, the Department of English will give preference to recent college graduates whose records show strong preparation, in content and quality, for graduate study in English. An undergraduate major in English is preferred. An applicant's record should show strength in related fields such as foreign language and literature, philosophy, history, and the arts.

Scores on the aptitude test and an achievement test of the Graduate Record Examination are required. Two letters of recommendation are required from persons qualified to speak about the applicant's academic performance. A personal interview is not expected. All applicants must be recommended by the Department of English and approved by the Graduate Dean of Arts and Sciences.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

1. A minimum residence period of two semesters during the regular academic year is required.

2. A candidate for the degree must complete English 500, *Introduction to Literary Scholarship*, and twenty-one additional semester credits with a grade of "C" or better in each course and an average of at least "B". English 500 must be completed in the student's first semester of graduate work. This course carries three semester credits but is conducted on a pass or fail basis with no grade. Normally all courses will be at the graduate (500) level and at least eighteen hours must be¹; but undergraduate courses may be approved by the department in special circumstances.

¹ English 410, *Beowulf*, may be counted among the eighteen hours.

3. A reading knowledge of a classical or modern foreign language is required.

4. A student will be admitted to candidacy for the degree of Master of Arts upon satisfactory completion of one semester (12 hours) of graduate work.

5. A candidate must submit a thesis to his examining committee in final form for acceptance or rejection three weeks before he expects to receive the degree. The examining committee will consist of three members of the faculty, one of whom may be from a department other than English, appointed by the Graduate Dean in consultation with the chairman of the department.

6. A candidate must complete satisfactorily a comprehensive examination set by his examining committee. This examination, which may be written or oral or both, will be designed to test his comprehension of his field of study and may include a review of his seminar papers as well as his thesis.

7. All requirements for the degree must be completed within a maximum period of six calendar years after the student begins graduate study as a candidate for the degree.

GRADUATE COURSES

500. Introduction to Literary Scholarship. *Fall* (3) Mr. Evans. Required of all graduate students.

A critical examination of the means, methods, and aims of literary scholarship.

511. Middle English Literature and Its Cultural Background. *Fall* (3) Mr. Conlee.

Lectures and readings in Middle English poetry, relating the works studied to their cultural milieu.

516. The Poetry of Edmund Spenser. *Spring* (3) Mr. Evans.

A seminar in the poetry of Spenser and related prose and verse of the English and European Renaissance.

531. Early American Literature. *Fall* (3) Mr. Dolmetsch.

A seminar in the transplantation and adaptation of European literary ideas and the development of indigenous themes and styles in American writing before 1800.

532. American Poetry. *Spring* (3) Mr. Scholnick.

A seminar in the development of the American tradition of poetry with special emphasis on the long poem.

552. Form and Idea in the English Novel. *Spring* (3) Mr. Smith.

A seminar in the relation between form and idea in the novel, studied especially in the works of Jane Austen and Virginia Woolf, with comparisons to other novelists.

553. Satire. *Fall* (3) Mr. Maccubbin.

A seminar in the nature of satire, with particular emphasis on English satire of the Restoration and Eighteenth Century.

554. Modern Drama. *Spring* (3) Mr. McCulley.

Lectures and readings in modern English and American drama and its international background.

560. Thesis. *Fall and Spring* Staff.

580. Individual Reading. *Fall and Spring* (3) Staff. May be elected once only, by permission of the department.

A course of independent reading in a special topic of a student's interest.

Fine Arts

PROFESSORS THORNE, NEWMAN (*Chairman of the Department*), AND
ROSEBERG. ASSISTANT PROFESSORS COLEMAN, CRANE AND KORNWOLF.
LECTURER HOUGHLAND.

REQUIREMENTS FOR CONCENTRATION

Students concentrating in Fine Arts should choose between a concentration in History of Art or in Art.

Students concentrating in the History of Art are required to take F.A. 111, F.A. 112, F.A. 201, F.A. 202, F.A. 401 and fifteen additional credits in the History of Art.

Students concentrating in Art are required to take F.A. 111, F.A. 112, F.A. 201, F.A. 202, and eighteen additional studio credits at least six of which must be at the 400 level, and six additional credits in History of Art.

DESCRIPTION OF COURSES

201, 202. Introduction to the Arts. *Fall and Spring* (3,3) Mr. Newman.

The development of architecture, sculpture, and painting from the earliest times to the present day. Open to freshmen with the permission of the Chairman.

211, 212. Elementary Drawing. *Fall and Spring* (3,3) Mr. Coleman.

A creative experience in learning to see with emphasis on the visual elements of design, including composition, line, pattern, form and in the second semester, the use of color. A preparatory course for further work in architecture, sculpture, painting and graphics. *Six studio hours.*

213, 214. Introduction to Architecture. *Fall and Spring* (3,3) Mr. Houghland.

The first semester involves the development of a basic vocabulary for architectural design: drafting, perspective, shades and shadows, scale, and proportion.

The second semester further investigates the role of an architect with specific design problems and the development of presentation techniques. *Six studio hours.*

215, 216. Elementary Sculpture. *Fall and Spring* (3,3) Mr. Roseberg.

A practical course in the use of the sculptor's tools and materials such as modelling in clay, plaster casting, and direct building in plaster, over a metal armature. *Six studio hours.*

304. Art in the Ancient World. *Spring* (3) Mr. Roseberg.

305. Colonial American Architecture. *Fall* (3) Mr. Thorne.

306. Colonial American Painting. *Spring* (3) Mr. Thorne.

307, 308. Art in the Modern World. *Fall and Spring* (3,3) Mr. Kornwolf.

Architecture, painting, and sculpture in the nineteenth and twentieth centuries. This course is designed for juniors and seniors who wish some understanding of the complex development of the visual arts since the revolutions of the late eighteenth century.

313, 314. Architectural Design. *Fall and Spring* (3,3) Mr. Houghland.

A course in architectural design introducing various design philosophies, the presentation of specific architectural problems developing methods, materials, composition and function for selected types of buildings. *Six studio hours.*

315, 316. Painting. *Fall and Spring* (3,3) Mr. Thorne.

A course in creative expression using the various media of painting. *Six studio hours.*

317, 318. Advanced Sculpture. *Fall and Spring* (3,3) Mr. Roseberg.

Compositions in relief and in the round, development of original designs from preliminary sketch to completed work in wood, plaster, stone, ceramics, or welded metal. *Six studio hours.*

321, 322. Ceramics. *Fall and Spring* (3,3) Mr. Crane.

An introduction to the procedures in ceramic art, including hand building, the use of the wheel, firing, and the making of glazes. *Six studio hours.*

323, 324. Graphic Arts. *Fall and Spring* (3,3) Mr. Coleman.

A course in the many ways of print making. The wood-cut, lino-

block, etching, lithograph and serigraph will be studied. *Six studio hours.*

331. Fundamentals of Design. *Fall or Spring* (3) Mr. Crane.

Through a series of special problems on the elements of two and three dimensional design, students are introduced to a general survey of the visual arts and their media. *Six studio hours.*

401-402. Art in the Twentieth Century. *Fall and Spring* (3,3) Mr. Coleman and Mr. Kornwolf.

First semester lectures and seminar reports on modern painting, sculpture, and architecture. Second semester devoted primarily to seminar reports and research on special problems in contemporary painting, sculpture, and architecture.

404. Medieval Art. *Spring* (3) Mr. Newman.

History of the architecture, painting, and sculpture of the Middle Ages.

405. Renaissance and Baroque Architecture. *Fall or Spring* (3) Mr. Kornwolf.

A survey in depth of the major developments in European architecture from the fifteenth to the eighteenth centuries.

406. Renaissance Painting. *Fall or Spring* (3) Mr. Kornwolf.

A survey of European painting from 1300 to 1520.

407. Renaissance Sculpture. *Fall* (3) Mr. Roseberg.

A survey of Italian Sculpture from 1200 to 1700.

409, 410. Oriental Art. *Fall and Spring* (3,3) Mr. Roseberg.

The first semester is devoted to the art, culture, and religious background of India, and includes the influences of Indian culture on other Asian countries such as Cambodia, Thailand, Java, and Tibet.

The second semester is a survey of the art and architecture of China and Japan. (Not offered 1970-71.)

†411. Problems in Fine Arts. *Fall or Spring* (1 to 4) Staff.

This course is for the advanced student and is arranged on an individual basis.

415, 416. Advanced Painting. *Fall and Spring* (3,3) Mr. Thorne.

Compositions in various media to be developed from original designs.
Six studio hours.

***495-496. Honors.** *Fall and Spring* (3,3) Mr. Newman.

The course comprises (a) supervised reading and discussion in the area of the student's major interest, (b) the preparation and presentation by May 1 of either an Honor's Essay in the area of Art History or Criticism or a major showing of the student's performance in studio work accompanied by a short essay justifying his work, and (c) satisfactory completion of a comprehensive examination in the area of the student's major interest.

NOTE: A student planning to take Honors in Fine Arts should begin in his junior year a special program of reading from a selected bibliography prepared by the Department.

All work produced by the students of the studio classes remains the property of the College of William and Mary until released by the appropriate faculty member in charge. The College will not be responsible for theft or damage to such works.

Geology

ASSOCIATE PROFESSOR GOODWIN (*Chairman of the Department*). PROFESSOR BICK. ASSOCIATE PROFESSORS CLEMENT AND JOHNSON.

REQUIREMENTS FOR CONCENTRATION

1. For those students desiring an A.B. degree with a concentration in geology as preparation for law, business, government, or other nonprofessional application of geology (35-36 credits):
 - a. Geology 101, 102, 201, 202, 303, 401 or 402, 403, 404
 - b. Two of the following courses:

Geology 301, 302, 304, 401 or 402, 405, 406 (one of these courses must be Geology 301, or 302, or 406)

The student is expected to select electives in such fashion as to present a strong background in a subject area other than geology.
2. For those students desiring a B.S. degree who intend to continue geological studies or to engage in professional geological work upon graduation (37 credits):
 - a. Geology 101, 102, 201, 202, 301, 302, 303, 304, 406, 408, 411, 412.

DESCRIPTION OF COURSES

101-102. Earth Processes. *Fall and Spring* (4,4) Mr. Goodwin and Staff.

Processes of the hydrologic and rock cycles, and their influence on the composition, structure, and evolution of the earth. Voluntary field trips. *Three class hours, three laboratory hours.*

101H-102H. Earth Processes. *Fall and Spring* (4,4) Mr. Bick.

An introduction to geology for students in the General Honors program. Primary aims of the course are an exploration of what science is, how the scientist thinks, and how scientific thought evolves. Fewer topics are covered in greater depth as compared to Geology 101, 102. Satisfies distribution requirements. *Three class hours, three laboratory hours.*

105. Physical Geography. *Fall* (3) Mr. Bick.

An introduction to physical geography encompassing descriptive climatology and descriptive geomorphology.

201-202. Mineralogy—Petrology. *Fall and Spring (4,4) Mr. Clement. Prerequisite or corequisite: Chemistry 101-102 or Chemistry 115, or permission of the instructor.*

Crystallography, mineralogy, and petrology. *Fall:* crystal chemistry, structure, and symmetry; mineral and rock genesis in the igneous environment. *Spring:* mineral and rock genesis in sedimentary and metamorphic environments. Field trips. *Three class hours, three laboratory hours.*

301. Sedimentation and stratigraphy. *Fall (4) Mr. Johnson. Prerequisite: Geology 202, or permission of the instructor.*

The principles of formation, transport, and deposition of sediment and the interpretation of sedimentary rocks. Field trips. *Three class hours, three laboratory hours.*

302. Structural Geology. *Spring (4) Mr. Goodwin. Prerequisite: Physics 101, or permission of the instructor.*

Theoretical, experimental, and field study of deforming forces and their effects on earth materials. Field trips. *Three class hours, three laboratory hours.*

303. Historical Geology. *Fall (3) Mr. Johnson. Prerequisite: Geology 102.*

The origin and evolution of the earth, including the forms of life that have inhabited it, through geologic time. North America is emphasized. (Not offered 1971-72.)

304. Quantitative Geologic Models. *Spring (3) Mr. Bick. Prerequisite or corequisite: Mathematics 202, or permission of the instructor.*

The probabilistic basis of geologic processes and its application to geologic hypotheses through quantitative testing of conceptual models. (Not offered 1971-72.)

305. Environmental Geology. *Spring (3) Mr. Johnson. Prerequisite: The basic two courses in any one of the sciences.*

An introduction to the causes and extent of air and water pollution, and to methods of preventing, reducing, or eliminating problems relating to ground and surface water, air, and solid waste.

401. Economic Geology of Nonmetals. *Fall (3) Mr. Goodwin.*

The origin, distribution, production, and economics of fossil fuels and major industrial minerals and rocks. The relationship of non-metallic resources to the national interest and economy and to various aspects of national and international politics is emphasized.

402. Economic Geology of the Metals. *Spring* (3) Mr. Clement.

The origin, distribution, production, and economics of the ores of major metals. The relationship of ores and metals to the national interest and economy and to various aspects of national and international politics is emphasized.

403. History of Geology. *Fall* (3) Mr. Bick.

The development of modern geologic thought, emphasizing the conceptual contributions of geology to Western thought, such as those giving rise to conflict over the origin and age of the earth, rather than technical contributions.

404. Geology of the United States. *Spring* (3) Mr. Johnson.

Descriptive stratigraphy, structure, physiography, and economic geology of the United States. Two weekends will be devoted to field trips.

405. Optical Petrography. *Fall* (3) Mr. Clement. *Prerequisite: Geology 202.*

An introduction to the theory and use of the polarizing microscope. *Two class hours, three laboratory hours.* (Not offered 1971-72.)

406. Paleontology. *Spring* (4) Mr. Johnson.

The role of fossils in the study of organic evolution, ancient environments, and time relations of rock sequences. The laboratory stresses invertebrate morphology, quantitative measurement, and interpretation of local fossiliferous rock units. Field trips. *Three class hours, three laboratory hours.* (Not offered 1971-72.)

408. Geologic Field Methods. *Fall* (1) Staff.

Description and sampling of sediments and rocks, and geologic mapping utilizing topographic maps, aerial photographs, and surveying instruments. *Three laboratory hours.* (Not offered 1971-72.)

411, 412. Problems in Geology. *Fall and Spring* (1,1) Staff. *Prerequisite: Senior standing.*

An exploration of geologic problems, either through a reading program and one class discussion each week or through a research project.

Geography

Those interested in geography can prepare themselves for further study in the field by selecting suitable courses from among the following while concentrating in a discipline allied to geography:

Physical Geography

Geology 105—Physical Geography

Economic Geography

Business Administration 309—World Resources

Geology 401—Economic Geology of Non-metals

Geology 402—Economic Geology of Metals

Human Geography

Anthropology 202—Cultural Anthropology

Sociology 349—Human Geography

Regional Geography

Anthropology 323—Ethnology of South America

Anthropology 344—Ethnology of Oceania

Anthropology 342—Ethnology of Southeast Asia

Anthropology 331—Ethnology of Africa

Government

PROFESSORS ROHERTY (*Chairman of the Department*), HAMILTON, KIM, MORROW, AND MOSS. ASSOCIATE PROFESSORS CURRY,¹ EDWARDS, GRAYSON,² AND WARD. ASSISTANT PROFESSORS BAXTER, DEWEYDENTHAL, MEEKER AND SMITH.³

REQUIREMENTS FOR CONCENTRATION

The Government concentration consists of forty-two (42) credits of coherently related work selected by the student in consultation with his departmental advisor. Thirty-three (33) credits must be taken in the Department of Government. Each concentrator must take Government 201 and 202 and do a minimum of three (3) hours or course work in each Core Area of the concentration. The four Core Areas are (I) Political Philosophy, (II) Comparative Government and Politics, (III) International Politics, and (IV) American Government, Politics, and Administration. At least three (3) hours of course work must be done at the 400 level. Concentrators are admitted to Honors in Government with the permission of the Department.

Nine (9) credits in related courses are required. With the exception of History 201, 202 all related work must be at the 300 or 400 level and have the approval of one's advisor. It is recommended that concentrators carry their foreign language study beyond the minimum requirement for distribution.

DESCRIPTION OF COURSES

201, 202. Introduction to Government and Politics. *Fall and Spring* (3,3) Staff.

Core Area I: Political Philosophy

303, 304. Survey of Political Philosophy. *Fall and Spring* (3,3) Mr. Roherty and Mr. Smith.

The course is developed around two themes, the *classical tradition* and the *modern tradition* in political philosophy. In the first semester the political works of Plato and Aristotle are taken as the standards of the classical tradition. Selected works of medieval Christian writers

¹ On leave of Absence, 1970-71.

² On Leave of Absence, 1970-71 (I).

³ On Leave of Absence, 1970-71 (II).

are also included. Machiavelli and Hobbes define the *modern tradition* as this is taken up in the second semester. The works of Locke, Rousseau, and Burke complete the course.

305. Contemporary Political Philosophy. *Fall or Spring* (3) Mr. Roherty, Mr. Smith, and Mr. DeWeydenthall.

An examination of the revival of political philosophy from the late nineteenth century to the present. Writers to be studied will include Nietzsche, Sorel, Freud, Weber, Lenin, Camus, Jaspers, Barker, Arendt, Tillich, Oakeshott, De Jouvenel, Dahl, Strauss, Voegelin.

401. American Political Thought. *Fall* (3) Mr. Smith.

Basic problems of political theory will be viewed from the perspective of the American experience.

405. Studies in Political Philosophy. *Fall or Spring* (3) Mr. Moss, Mr. Roherty, Mr. Smith.

This course will examine a particular theme or problem such as the following: political development and political community, authority and freedom, utopia and anti-statism.

412. Philosophical Problems in the Study of Politics. *Spring* (3) Mr. Baxter. Same as Philosophy 412.

Basic concepts to be examined in this course include science, theory, explanation, causation, testing, predicting, facts and values. Attention will be given to theory formulation based on quantitative data.

Core Area II: Comparative Government and Politics

311, 312. Comparative Government. *Fall and Spring* (3,3) Miss Hamilton and Mr. Grayson.

A comparative study of institutions and processes of government. Historical, cultural, social and economic factors will be given considerable attention. In the first semester, countries of western Europe will be considered with emphasis on England and France. In the second semester, selected governments of non-western nations will be analyzed.

334. The Soviet Union. *Fall* (3) Mr. DeWeydenthall.

A study of the political system of the Soviet Union and an analysis of the historical roots of Russian political thought in relation to Marxism as interpreted by the Soviets. Attention will be given to Communism as a world movement.

336. The Far East. *Fall* (3) Mr. Kim.

A survey of the national and international politics of China, Japan and Korea. After a preliminary view of Far Eastern political and social traditions, this survey examines the manner in which these countries responded to the Western impact. Major attention will be given to the government and politics of Communist China and post-war Japan.

337. Africa. *Spring* (3) Mr. Kim.

A study of selected newly independent nations of Africa south of the Sahara. Emphasis will be placed on phenomena such as the rise of nationalism, the development of African party and governmental systems, and the role of Africa in international politics.

338. Latin American Politics and Government. *Spring* (3) Mr. Grayson.

A comparative analysis of the types of government of selected Latin American nations. Appropriate consideration will be given to current conditions and to such problems of general political development as recruitment and socialization, communication and articulation, interest aggregation and decision-making.

381. Political Leadership. *Spring* (3) Mrs. Meeker.

A study of the nature of leadership in the context of different political environments. Attention will be given to the problems of identifying and defining political leaders, recruitment and performance, the personality orientations of political leaders, and to public images of leaders and leader roles.

410. British Government and Politics. *Fall* (3) Mr. Moss and Mr. Ward.

A study of political institutions and political behavior in the United Kingdom and Eire. Special attention is given comparisons with the United States and the parliamentary democracies of the Commonwealth.

411. Problems in Comparative Politics. *Spring* (3) Miss Hamilton. *Prerequisite: Consent of the instructor.*

A study of political institutions and political behavior in France. Emphasis will be placed on the fifth Republic and problems related to political and economic modernization.

431, 432. Comparative Political Systems. *Fall and Spring* (3,3) Mr. Baxter. *Prerequisite: Government 311, 312 or consent of the instructor.*

A comparative approach to the study of politics. First Semester: Scope and methods of comparative political analysis, individual students prepare and present research proposals. Second Semester: students execute research proposals, present intermediate and final reports.

Core Area III: International Politics

323, 324. International Relations. *Fall and Spring* (3,3) Mr. Ward and Mr. Kim.

The theory and practice of International Politics. During the first semester the course will consider the international system of states and the bases of national power. The second semester will be a study of American foreign policy with an emphasis of the process of policy formulation. Selected foreign policy problems will be considered.

325. International Organization. *Spring* (3) Mr. Kim.

A study of the development of the structures and procedures of international organization, and of the methods for pacific settlement of international disputes. Special attention will be given the League of Nations and the United Nations and the gains and failures of these organizations.

403. National Security Policy. *Fall* (3) Mr. Roherty.

This course is an appraisal of such problems as aggression, "just war," the use of nuclear weapons, ideological and psychological conflict, and the role of the military in national policy. The effort is made through studies of these problems to develop a body of theory around the theme of national security.

436. Contemporary International Relations of East Asia. *Spring* (3) Mr. Kim.

Analysis of postwar problems in international relations of the Far East. Topics include: US-Soviet rivalry in East Asia; US role in the democratization of Japan and Korea; Soviet influence on China and North Korea; the emergence of China and its impact on the international relations of Asia; recent problems in US relations with East Asia; and problems of divided Korea.

Core Area IV: American Government, Politics, and Administration

306. Political Parties. *Fall* (3) Mr. Moss, Mr. Curry, Mr. Edwards.

An analysis of the nature, sources, and organization of political power, and of the factors governing its conquest and surrender. The course deals chiefly with American politics but makes comparisons with politics of other countries. Special attention is given the problem of analyzing and reporting political situations.

351. Introduction to Public Administration. *Fall* (3) Mr. Morrow.

Policy-making and administration in government agencies. This course analyzes comparative administrative systems in the United States with emphasis on decision-making structures, constituency groups, and policy outputs.

353. The Politics of States and Localities. *Spring* (3) Mr. Miri.

An examination of the institutions and processes of government and politics in American states and localities. Relationships among national, state, and local governments will be analyzed in the context of a federal system.

371, 372. American Politics. *Fall and Spring* (3,3) Mr. Curry, Mr. Edwards and Mr. Morrow.

The political process at the national level, including such topics as organization and recruitment, governmental decision-making, relationships among departments, and political parties and leadership. The first semester is concerned with the executive and legislative branches; the Supreme Court is considered in the second semester.

373. American Civil Liberties. *Spring* (3) Mr. Curry.

This course is an intensive study of the rights of Americans as guaranteed by the Constitution. The changing character of civil liberties problems in the United States will be stressed with attention given to the legal, historical and political context of the cases studied. Class discussion and reports will be emphasized.

408. The Politics of the South. *Spring* (3) Mr. Moss.

This course is a study of political transition in the South. The nature and variety of traditional Southern politics will be discussed and the impact of the forces of change will be analyzed.

452. The Administrative Process. *Spring* (3) Mr. Morrow.

A study of decision-making in modern bureaucracy with primary emphasis on United States practice. The functions and dysfunctions of large public service organizations will be dealt with.

454. The Politics of Metropolitan Areas. *Fall* (3) Mr. Miri. *Prerequisite: Government 351, or 353, or Consent of Instructor.*

An examination of the American political system's capacity to confront and solve problems of the nation's urban areas. Historical, economic, and sociological factors affecting the political process in "metro areas" will be considered.

465. Public Opinion and Voting Behavior. *Fall* (3) Mr. Edwards.

The relationship between opinions and political policymaking, including the characteristics of political opinions, patterns of voting behavior, and the importance of leadership.

490. Topics in Government and Economic Policy. *Fall or Spring* (3) Staff. *Prerequisite: Concentration in government, senior standing, graduate, and permission of instructor.*

Topics in Government and Economic Policy. This course will be offered separately or in conjunction with the Department of Economics.

HONORS STUDY

495, 496. Senior Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Senior Honors in Government will be responsible for (a) reading and discussion of selected materials; (b) satisfactory completion by May 1 of an original scholarly essay; (c) satisfactory performance in a comprehensive examination in the field of the student's major interest.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

An applicant must have completed the requirements for a bachelor's degree in an institution of approved standing. An undergraduate concentration in political science is desirable; however, applicants in other fields of concentration may apply.

Admission to the program will be with the approval of the Department of Government and the Committee on Graduate Studies of the

Faculty of Arts and Sciences. An applicant may be required to make up certain deficiencies as determined by the Department of Government.

The Graduate Record Examination will be required of all applicants.

A member of the Government faculty will work with each candidate in the planning of his program. The program must have the approval of the Head of the Department of Government.

The candidate must complete satisfactorily 24 hours of course work, one-half of which must be at the 500 level. (No credit will be given for a grade below B.) Two semesters of residence in the College of William and Mary are required for the degree of Master of Arts. (Nine semester hours is the minimum residence requirement for a full-time graduate student.)

The Department of Government will make a formal recommendation of candidacy when the candidate completes satisfactorily one semester of course work. Upon achieving formal candidacy, and before registration for the second semester, the candidate must propose his thesis title for approval by the Head of the Department. At this time the Head of the Department will designate the candidate's thesis advisor.

A comprehensive oral examination covering the entire field of study is required. Ordinarily this examination will be given in the final month of the second semester of course work and will not include a defense of the thesis.

At the beginning of the second semester of course work, the Head of the Department will appoint a candidate committee. The candidate committee will consist of three department members, and in each instance will include the candidate's thesis advisor, who will act as chairman. This committee will read the candidate's thesis, prepare and administer the oral examination, and make recommendations concerning the candidate's performance to the Head of the Department. All department action with respect to a candidate must be consistent with the recommendations of a majority of his committee.

The candidate may not present himself for oral examination until he has passed an examination in a foreign language appropriate to his plan of study.

All requirements for the degree must be completed within six calendar years.

GRADUATE INTERN PROGRAM

The Department of Government conducts a program of internships in politics in conjunction with the Master of Arts Degree program.

Candidates for the Master of Arts Degree in Government whose academic and career interests are directed towards national or local government and political parties are invited to apply for internships.

GRADUATE COURSES

The Department of Government will offer the following graduate courses:

501. General Colloquium in Political Science (3), Staff.

503. Seminar in Political Philosophy (3), Roherty, Smith, DeWeydenthall.

505. Seminar in Comparative Politics (3), Hamilton, Baxter.

507. Seminar in International Politics (3), Kim, Ward.

509. Seminar in American Politics (3), Curry, Edwards.

511. Readings in Political Science (3), Staff.

513. Seminar in Public Policy and Administration (3), Morrow, Roherty.

560. Thesis (6), Staff.

Government 501. The General Colloquium in Political Science will deal with basic problems in the discipline including the identification of significant substantive questions of political science, methods of investigation and research, and the dichotomy of theory and practice. Each candidate must include Government 501 in his program.

Government 560. (Thesis) requires that each candidate select a meaningful question or problem within the discipline for independent investigation and development. The master's thesis must exhibit the requisite writing skill and full documentation that are essential aspects of scholarship. However, the qualities of creative initiative and independence of judgment are understood as primary.

The candidate will complete his 500 level requirement (or 9 additional hours) by selecting from among the following: Government 503, 505, 507, 509, 511, and 513. When these courses are offered the specific topics to be considered will be announced in advance by the instructor. Ordinarily the candidate will participate in two seminars (one in the field of his thesis) and Government 511.

The remaining 12 hours of course work may be selected from the undergraduate offerings of the Department of Government. Up to six hours of work, however, may be taken outside of the department subject to the approval of the advisor.

History

RICHARD LEE MORTON, CHANCELLOR PROFESSOR OF HISTORY, EMERITUS. PROFESSORS SHERMAN (*Acting Chairman of the Department*), BEYER, BROWN, DURDEN,¹ FOWLER, FREEMAN, L. JOHNSON, McCULLY, SELBY, AND TATE.² ASSOCIATE PROFESSORS COYNER, DONALDSON, ESLER, AND McCORD. ASSISTANT PROFESSORS CRAPOL, EWELL,³ FARRISS,² FIERING, FUNIGIELLO, GERLACH,⁴ KIM, McARTHUR, SHEPPARD, STRONG, AND WALKER. INSTRUCTOR EVANS.⁵ LECTURERS CAPPON (EMERITUS), CARSON, HUTSON, H. JOHNSON, KURTZ, AND RILEY.

REQUIREMENTS FOR CONCENTRATION

Concentration in History requires 30 semester credits in history, including History 101, 102, 201 and 202, except that: (1) appropriate freshman seminars in history may, with the approval of the department chairman, be substituted for one or more semesters of the preceding courses; (2) one or more semesters of the preceding courses may be waived by the department chairman upon demonstrated proficiency in European or American history. Students are advised not to limit their junior and senior year courses to those dealing with the history of any one nation. Foreign languages are recommended for students planning to concentrate in history.

AREA REQUIREMENTS

History 101, 102, or two semesters of freshman seminars in history, or any two-semester combination of both, are the courses that normally should be taken to meet the requirement for Area 2. Students choosing history to fulfill the requirement for a logical sequence of four courses outside their area of concentration should consult their faculty advisor before selecting their additional two courses.

DESCRIPTION OF COURSES

EUROPEAN HISTORY

101, 102. History of Europe. Fall and Spring (3,3) Staff.

¹ James Pinckney Harrison Visiting Professor of History, 1970-1971.

² On leave of absence 1970-71.

³ Visiting Assistant Professor, second semester 1970-71.

⁴ Visiting Assistant Professor, 1970-71.

⁵ Visiting Instructor, first semester 1970-71.

A general introduction to the history of European civilization from classical times to the present. The first semester goes to 1715; the second, from 1715 to the present day.

***101H, 102H. History of Europe. (Honors course.)** *Fall and Spring* (3,3) Staff.

A general introduction to the history of Europe. The first semester examines classical and medieval influences on the modern world, and traces the development of modern civilization through the Renaissance and Reformation. The second semester will cover the period from the seventeenth century to the present. The course will seek particularly to develop understanding of the historical process and historical imagination. (Not offered 1970-71.)

150, 151. Freshman Seminar. *Fall and Spring* (3,3) Staff.
Topics to be announced.

301, 302. The Ancient World. *Fall and Spring* (3,3) Mr. Jones.¹

Ancient civilization from prehistoric times to the downfall of the Roman Empire. The first semester deals with the ancient Orient and Greece, up to B.C. 338; the second semester deals with Alexander, the Hellenistic World, and Rome. (Same as Greek 311-Latin 312. The course cannot be counted for concentration in history.)

311, 312. Europe in the Middle Ages. *Fall and Spring* (3,3) Mr. Freeman.

The origins and nature of Medieval civilization. First semester; the newly forming West and the Roman, German, Byzantine, and Arab influences which worked to create it. Second semester: the aggressive expansion of government, the church, business, and city life along with the counter-development of restrictive forces that limited their free expansion.

313, 314. Renaissance and Reformation. *Fall and Spring* (3,3) Staff. *Prerequisites: History 101, 102.*

This course in the cultural history of Europe from the fourteenth through the seventeenth centuries will seek to probe the origins of the modern Western mind. Sympathetic attention will be given to artistic and ethical values; to religious, philosophical, and scientific world views; and to exploration, war, politics, and socio-economic circumstances. (Not offered 1970-71.)

¹ Chancellor Professor of Classical Studies.

315, 316. The Age of Absolutism and Revolution in Europe, 1648-1871. *Fall and Spring* (3,3) Mr. Sheppard.

An intensive survey of Europe in transition: Absolutism, Enlightenment, Democratic Revolution and the emergence of the modern state.

317, 318. Recent Europe, 1871 to the Present. *Fall and Spring* (3,3) Mr. Strong. *Prerequisites: History 101, 102.*

First semester: the background to World War I, the course of the war, the Versailles settlement. The second semester: 1933 to the present, with emphasis on the failure of the Versailles settlement, World War II, and the emergence of contemporary Europe.

319, 320. History of England. *Fall and Spring* (3,3) Mr. McCord.

An introduction to English history from 1066 to the present; the first semester ends with the Glorious Revolution of 1688.

321, 322. The History of Russia. *Fall and Spring* (3,3) Mr. McArthur.

The political, economic, social and intellectual development of Russia. First semester to 1855. Second semester 1855 to the present.

323, 324. Intellectual History of Modern Europe. *Fall and Spring* (3,3) Mr. Esler.

Cultural and intellectual development of the western world from the end of the middle ages to the present. First semester: from the renaissance to the enlightenment. Second semester: the nineteenth and twentieth centuries.

409, 410. England Under the Tudors and Stuarts. *Fall and Spring* (3,3) Mr. Fowler. *Prerequisites: History 101, 102.*

The first semester, 1485-1603; the second semester, 1603-1714.

412. Constitutional History of Modern England. *Spring* (3) Mr. McCully.

Constitutional development from 1485 to the present, with major emphasis on the Tudor regime, the breakdown of conciliar government under the Stuarts, the establishment of limited monarchy, the rise of cabinet government and growth of democracy. (See Marshall-Wythe School of Law.)

413, 414. The Making of Modern England. *Fall and Spring* (3,3) Mr. McCord.

An examination of the political, economic, social, and intellectual changes which explain England's transition from an aristocratic to a democratic society. The course divides in the mid-Victorian period. (Not offered 1970-71.)

417, 418. The British Empire. *Fall and Spring* (3,3) Mr. McCully.

First semester: the formation and development of the old Colonial Empire through the American Revolution. Second semester: the rise of the new Empire through the nineteenth and twentieth centuries to the establishment of the British Commonwealth of Nations.

433, 434. Modern Germany. *Fall and Spring* (3,3) Mr. Strong.

First semester: origins and establishment of the Second Reich. Second semester: establishment of the Third Reich. (Not offered 1970-71.)

437, 438. History of France, 1715 to the Present. *Fall and Spring* (3,3) Mr. Sheppard.

First semester, 1715-1815. Intensive examination of a pre-industrial society with special emphasis on social, economic and intellectual problems during the ancien régime, Revolution and Napoleon. Second semester, 1815-present. Special attention to social and economic problems as well as to the politics of twentieth-century France.

471. The Russian Intelligentsia: Selected Problems. *Fall* (3) Mr. McArthur. *Prerequisite: History of Russia, or consent of instructor.*

Selected aspects of the nature and role of the Russian intelligentsia. Considerable use will be made of primary materials, including literature. A knowledge of the Russian language is not required, but will be utilized when available. (Not offered 1970-71.)

472. The Russian Revolution. *Spring* (3) Mr. McArthur. *Prerequisite: History of Russia, or consent of instructor.*

The origins, course, and impact of the Bolshevik Revolution. Considerable use will be made of primary materials. A knowledge of the Russian language is not required, but will be utilized when available.

474. Medieval England. *Spring* (3) Mr. Freeman.

Special emphasis will be placed on the period from the Norman Conquest through the fourteenth century, when the English were aggressive abroad and creative at home. The social, economic, political,

and military explanations for this expansive period will be examined. (Not offered 1970-71.)

AMERICAN HISTORY

201, 202. American History. *Fall and Spring* (3,3) Staff.

The development of the United States. Special emphasis is placed on the period since 1776. The course divides at the year 1877.

***201H, 202H. American History.** (Honors course.) *Fall and Spring* (3,3) Miss Walker.

Designed to give the student insight into problems of interpretation and methodology, and to acquaint him with the literature of American history.

309, 310. Survey of Latin American History. *Fall and Spring.* (3,3) Miss Evans, Miss Ewell.

The development of Latin America from Pre-Columbian times to the present. Emphasis is on the inter-action of European, Indian, and African elements in colonial society, the growth of national consciousness, and the related phenomena of political instability and economic underdevelopment.

†401, 402. Topics in Modern History. *Fall and Spring* (3,3) Staff.

A tutorial and seminar at the junior-senior level designed for outstanding history concentrators. Recommended for students intending to pursue graduate study.

***403. Colonial and Revolutionary Virginia.** *Spring* (3) Mr. Tate.

A specialized study of the founding and development of the Virginia colony with special emphasis on the evolution of its social and political structure. (Not offered 1970-71.)

405, 406. Early American History. *Fall and Spring* (3,3) Mr. Gerlach.

Special stress is laid on the ideas and institutions which developed in British North America and which, in the course of the struggle for independence and the formation of the union of states, emerged as a distinctive national culture. The course divides at the year 1763 and concludes with the adoption of the Constitution.

421, 422. The United States, 1815-1877. *Fall and Spring* (3,3) Mr. L. Johnson.

The origins, development, and outcome of the struggle between the North and South. (Not offered 1970-71.)

423, 424. The United States Since 1877. *Fall and Spring* (3,3) Mr. Sherman.

The emergence of modern America. Primary emphasis is on domestic developments. Major topics include: the rise of industry, political trends, economic and social reform movements, and the role of ethnic and racial minorities. The course divides around 1920.

425, 426. American Intellectual History. *Fall and Spring* (3,3) Staff.

A study of the relation between ideas and events from Colonial times through the present. Included are investigations of philosophical, religious, political, and economic ideas as they relate to the Reformation, the Enlightenment, Transcendentalism, slavery, Darwinism, Pragmatism, and other categories. A familiarity with philosophy is strongly recommended. (Not offered 1970-71.)

429. American Constitutional History to 1877. *Fall or Spring* (3) Mr. H. Johnson.

The evolution of the federal constitution from national supremacy and dual sovereignty, with special emphasis upon the constitutional significance of the post-Civil War amendments. (Not offered 1970-71.)

430. American Constitutional History 1878-Present. *Fall or Spring* (3) Mr. H. Johnson.

Federal constitutional development in the fields of business regulation, federal-state relations, civil liberties and civil rights. (Not offered 1970-71.)

441. The Caribbean. *Fall* (3) Mr. Beyer.

Deals particularly with the Spanish, English, and French West Indies. A sequential treatment of the eras of exploration and colonization; plantation prosperity and international rivalry; post emancipation problems; and incipient nationalism.

442. Brazil. *Spring* (3) Mr. Beyer.

Antecedents of modern Brazil, 1500-present, with accent on eco-

conomic, social, and cultural factors as well as on political growth in the Portuguese colony, the Empire, and the Republic.

443, 444. History of American Foreign Policy. *Fall and Spring* (3,3) Mr. Crapol.

The formulation and development of American foreign policy from 1775 to the present. The emphasis is on the domestic and international forces which have shaped American foreign policy. Special attention is given to the problems involved in the planning and execution of foreign policy. First semester: 1775 to 1899. Second semester: 1899 to present.

446. America in the Early National Period, 1789-1815. *Fall* (3) Mr. Tate.

The course emphasizes the position of the United States as a new nation and traces the developing character of American political culture in the Federalist and Jeffersonian periods. (Not offered 1970-71.)

459. Problems in Modern History. *Fall or Spring* (3) Mr. Durden, James Pinckney Harrison Professor of History, 1970-71.

Fall, 1970: "The Civil War and Its Aftermath, 1861-1900."

461, 462. American Social History. *Fall and Spring* (3,3) Mr. Brown.

The origins of American society in Europe and Africa, and the transition from deferential, rural, agrarian America to democratic, urban, industrial America.

463. The Old South. *Fall* (3) Mr. Coyner.

Social and Institutional history of the South from its colonial origins to secession, including, as major topics, the structure of society, the economy, slavery, and the Southern mind.

464. The Emergence of the New South, 1865-1965. *Spring* (3) Miss Walker.

A survey of the political, economic, and social developments in the South since the Civil War. The course will examine Reconstruction, the Bourbon regimes, Populism, racism, progressivism, the depression, the New Deal, and post World War II conditions.

466. The Negro in the United States Since 1861. *Fall or Spring* (3) Miss Walker.

An examination of the role of the black man in American society from the Civil War to the present. The course will consider political, economic, and social developments within the black community, as well as problems of black-white relations. (Not offered 1970-71.)

476. The Rise of Urban America. *Fall* (3) Mr. Funigiello.

The American city from the colonial period to the present; political and economic institutions, social change, technological innovations, planning theories, and the reactions of sensitive observers to the process of urbanization as expressed in imaginative literature and scholarly studies.

477, 478. History of Mexico. *Fall and Spring* (3,3) Miss Evans, Miss Ewell.

An intensive analysis of selected developments in Mexican history from Pre-Hispanic times to the present. Attention is focused on the evolution of the socio-economic structure within the context of revolutionary upheaval, culminating with a study of the Revolution of 1910 and its betrayal or fulfillment.

HONORS STUDY

†495, 496. Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Honors Study in History will be enrolled in this course during both semesters of their senior year. Each candidate will be responsible for (a) reading and discussion of a selected list of books in some specific area of historical literature; (b) a scholarly essay by May 1; (c) a comprehensive oral examination.

GRADUATE PROGRAM

The History Department has areas of particular strength where faculty personnel and library holdings are especially well suited for graduate study. In American history such specialties are: colonial and early national America; Civil War political and military history; history of American violence; ante-bellum South; New South; Negro in American history; twentieth-century America; history of American foreign policy; and history of Virginia. In English history such specialties are: medieval political, constitutional, and military history; Tudor and Stuart period; history of the British Empire; and nineteenth-century English history.

Admission Policy. Each applicant for admission to the graduate program in history must file a completed application form, provide official transcripts of his academic record for all work done at the college or university level, his scores for both the aptitude and advanced history portions of the Graduate Record Examination, and letters of recommendation from three of his college instructors. Applications must be complete by February 15 each year.

Minimum requirements for admission include an undergraduate degree from an accredited institution, an over-all academic average of 2.0 on a 3.0 scale, and the completion of 24 semester hours of work in history. Additional hours in history and course work in languages are very desirable.

Admission to the program will be made by the Graduate Dean of Arts and Sciences upon the recommendation of the chairman of the History Department. Each student admitted will be automatically considered for an award of a fellowship or assistantship if needed.

REQUIREMENTS FOR DEGREES OF MASTER OF ARTS AND DOCTOR OF PHILOSOPHY IN HISTORY

Master of Arts. Candidates for the degree must be in full-time residence for at least two semesters and, in addition to History 560 (Thesis), must obtain 24 semester credits in courses above the 300 level, of which 12 must be at the 500 level, with a quality point average of 2.0 or better on a 3.0 scale, including 501 and 502, or equivalent readings in British history for students in that field, a research seminar, and normally 459 or 578. Candidates must demonstrate a reading knowledge of one foreign or classical language (normally French, Latin, German, Russian, or Spanish), submit a thesis, and pass a preliminary and a comprehensive examination. Graduate students enrolled in advanced courses open to undergraduates shall be required to do additional work on the graduate level. Each graduate student shall have a faculty supervisor who will be primarily responsible for the student's choice of a thesis subject and for advising him regarding research and writing problems. All thesis subjects must be approved by the chairman of the Department; at present subjects are limited to American or British history.

The records of graduate students will be reviewed by the Department after the first semester of residence to determine final accep-

tance as candidates for the degree of Master of Arts. Degrees ordinarily will be awarded only in June.

Apprenticeship Programs in the Editing of Historical Books and Magazines and in the Operations of a Historical Library. The History Department in cooperation with the Institute of Early American History and Culture, the Earl Gregg Swem Library, and Colonial Williamsburg offers fourteen-month programs combining nine months of academic study leading to the degree of Master of Arts with practical experience in the editing of historical books and magazines and in the operations of a historical library. The programs commence on July 1 of each year and continue until August 31 of the succeeding year with breaks of approximately two weeks each before and after the intervening academic session in addition to the usual college holidays.

Doctor of Philosophy. At least three years of graduate study are required, of which all beyond the first, including one full academic year in continuous residence, must be at William and Mary. Doctoral students must have completed the course requirements for the Master of Arts degree, or have fulfilled similar requirements at an equivalent institution, and in addition must obtain at least 18 semester credits in courses above the 400 level with a grade of B or better in each course, including a research seminar and normally History 552. Students may not count History 660 (Doctoral Dissertation) toward this requirement. By the end of the sixth semester of graduate study each student must take a written and an oral comprehensive qualifying examination in the field encompassing the area of his dissertation and in two minor fields. Students concentrating in American history must offer one field in English or European history, and students in English history, one in European. The fields from which students may choose are: England to 1485; England since 1485; Europe 1500-1789; Europe since 1789; Early American history to 1815; the United States since 1815; the colonial period of Latin American history; Mexico, Central America, and the Caribbean countries in the national period; and Argentina, Brazil, and Chile in the national period.

Each student also must demonstrate a reading knowledge of two languages (normally French, German, Latin, Russian, or Spanish) by taking a departmental examination. The language requirement must be satisfied before the comprehensive examination is taken.

Each candidate for the Ph.D. must write a dissertation which is based upon original research and which makes a contribution to historical knowledge. The dissertation must have been read and approved prior to April 1 in any given year in order to receive the

degree the following June. The candidate must successfully defend his dissertation before the faculty.

At present dissertation subjects are limited to American and British history. All dissertation subjects must be approved by the chairman of the Department.

All requirements for the degree must be completed within seven years from the time of admission to the doctoral program.

GRADUATE COURSES

***501, 502. The Literature of American History.** *Fall and Spring* (3,3) Mr. Selby, Mr. Funigiello.

546. America in the Early National Period, 1789-1815. *Spring* (3) Mr. Kurtz. (Not offered 1970-71.)

551. Research Seminar in Early American History. *Fall* (3) Mr. Brown.

552. Advanced Seminar in American History. *Spring* (3) Mr. Brown. (Not offered 1970-71.)

553, 554. Research Seminar in European History. *Fall and Spring* (3,3). (Not offered 1970-71 or 1971-72.)

555. Research Seminar in British History. *Fall* (3) Mr. McCord.

557. Research Seminar in Nineteenth Century United States History. *Fall* (3) Mr. L. Johnson.

559. Research Seminar in Recent American History. *Fall* (3) Mr. Sherman.

560. Thesis. *Fall and Spring* (to be arranged) Staff.

561. Research Seminar in British Empire History. *Fall* (3) Mr. McCully.

563-576. Reading courses in history. *As required* (to be arranged; courses may be repeated for credit when the instructor determines there will be no duplication of material) Staff.

563, 564. England since 1485.

565, 566. Europe, 1500-1789.

567, 568. Europe since 1789.

569, 570. Early American History to 1815.

571, 572. The United States since 1815.

573, 574. Latin America.

575, 576. England to 1485.

578. Seminar in History. *Spring* (3)

1970-71: The Civil War and Its Aftermath. Mr. Durden.

1971-72: To be announced.

660. Doctoral Dissertation. *Fall and Spring* (to be arranged) Staff.

THE JAMES PINCKNEY HARRISON CHAIR OF HISTORY

The generosity of Mrs. James Pinckney Harrison and her son, Mr. James Pinckney Harrison, Jr., has enabled the College to establish an endowed chair in History in honor of James Pinckney Harrison, Sr. The purposes of this endowment are explained by the donors as follows:

The James Pinckney Harrison Chair of History is established to encourage the study of history as a guide for the future, as a field of absorbing interest and pleasure, and as a source of the wisdom, charm and gentility exemplified by James Pinckney Harrison. Born in Danville in 1896, he spent much of his life until his death in 1968 in Charles City County, not far from "Berkeley," his ancestral home. Far-ranging travels for business and country led him to an appreciation of many cultures of the world, but also strengthened his love and commitment to Virginia. As Chairman of the Board of Universal Leaf Tobacco Company of Richmond for many years, James Pinckney Harrison served in many civic, philanthropic and business affairs, ever enriching the life of those around him.

Home Economics

ASSISTANT PROFESSOR T. MILLER (*Chairman of the Department*).

The purpose of the Home Economics Department is to offer courses that will be useful to the students in their own home and daily living at school. Attention will be directed as much as possible toward individual or group needs and interests. Classes will be conducted in the form of discussions, lectures, demonstrations and laboratory work. Textbooks may be purchased but are not necessary.

Credit will not be offered beginning September 1971.

209. Foods: Principles of Preparation. *Fall and Spring* (3) Mrs. Miller.

A study is made of selection, cost and the fundamental scientific principles of food preparation and conservation of nutritive values. Aesthetic factors in family meals are presented. *One class hour, four laboratory hours.*

210. Foods: Meal Planning and Dining Customs. *Fall and Spring* (3) Mrs. Miller.

This course includes the serving of nutritious family meals and special meals, menu planning at different levels of cost, marketing, organizing and preparations. Attention is given to the cultural and social values in family dining. *One class hour, four laboratory hours.*

301. Nutrition and Physical Fitness. *Spring* (3) Mrs. Miller.

Basic nutritional knowledge applicable to achieving optimal health is stressed. Malnutrition in the United States and the world, and national and international activities for improving the nutrition of entire populations are studied. (Not offered Spring 1970-71.)

329. Home Management and Family Living. *Fall and Spring* (3) Mrs. Miller.

A study is made of organizing the household and planning the daily activities to conserve material and human resources and to provide a satisfying background for pleasant family living in the home and community.

431. Consumer Education. *Fall and Spring* (3) Mrs. Miller.

The position of the consumer as a buyer in the contemporary economic order is studied. Standards, grades, labels, food buying,

budgeting, owning versus buying a home, aids from Federal bureaus and certificating agencies are discussed. Comparative surveys are made. Family financial problems are stressed.

Honors¹

PROFESSOR BEYER, *Director*

Students in the General Honors Program enroll each semester during their freshman and sophomore years in one colloquium and in one or more introductory departmental honors course. General honors work may be continued on a more limited basis into the junior year.

Honors 101A and the other colloquia are centered on separate themes of interdisciplinary character that change from semester to semester. Representative themes for the year 1970-71 were "The Relevancy of the Individual," "Art and the Age of Change," "Authority in Communist Political Systems," and "Absurdity and Existentialism." Junior seminars differ from Freshman and Sophomore Colloquia in that they require a greater amount of independent work. Faculty are drawn from the College as a whole.

Departments offering honors courses on an introductory level (101H-102H or 201H-202H or both) were Economics, English, Geology, History, Psychology, Physics and Sociology.

Although most students in the program are admitted as entering freshmen, the opportunity exists for other freshmen and sophomores to be admitted at a later date on the basis of performance in college, interest, and faculty recommendations. Continuation in the general honors program is conditioned upon the student's intellectual vitality, interest, and on whether he is performing with distinction in his studies as a whole. A student may withdraw from the program at the end of any semester without penalty.

101A, 101B, 101C, 101D Colloquia on special themes; first semester; three credits. By invitation.

102A, 102B, 102C, 102D Colloquia; second semester; three credits. By invitation.

201A, 201B, 201C, 201D Colloquia; first semester; three credits. By invitation.

¹ For further information on general honors and on departmental honors, see pages 83 and 104 respectively. Descriptions of the colloquia are available on request from the Office of the Director of Honors.

- 202A, 202B, 202C, 202D Colloquia; second semester; three credits. By invitation.
- 301A Seminar; first semester; three credits. By invitation.
- 302A Seminar; second semester; three credits. By invitation.

Humanities

201, 202. Literature. *Fall and Spring* (3,3) Mr. Evans and Mr. Scholnick.

An introduction to the interpretation and evaluation of major works of literature, in English. About ten works are studied, including portions of the Bible, a classical epic, several Greek and Shakespearean dramas, and representative novels, plays and poems of various ages and cultures. (Not offered 1971-72.)

Mathematics

PROFESSORS REYNOLDS (*Chairman of the Department*) AND SOUTHWORTH.
ASSOCIATE PROFESSORS CATO, LAWRENCE, O'NEIL, PROSL, RUBLEIN,
SANWAL AND TURNER. ASSISTANT PROFESSORS BAKER, BANGS, BYNUM,
CONNER, DREW, EASLER, GIBBS, MELVIN, POOLE, RABINOWITZ AND
STANFORD. INSTRUCTORS CARTWRIGHT AND DICKEY.

REQUIREMENTS FOR CONCENTRATION

Concentration in Mathematics consists of 36 or more semester credits at the 200 level and above including the following: Mathematics 201, 202, 203, 302, 305, 307, 311, 312 and 12 additional hours from the 300 and 400 level including at least six hours of one continuous 400 level course. Mathematics 103, 105-106, 230, 240, 331-332 and Engineering Graphics 201, 202 may not be applied toward concentration in Mathematics.

DESCRIPTION OF COURSES

103. Algebra-Trigonometry. *Fall and Spring* (3,3) Staff.

A study of the real number system, sets, function, graphs, equations and inequalities, systems of equations, matrices and determinants, followed by a study of the trigonometric functions and their properties. Recommended only for science majors who have a deficiency in their training. This course may not be applied either towards concentration in mathematics or towards satisfaction of college area requirements.

105, 106. Fundamental Concepts of Mathematics. *Fall and Spring* (3,3) Staff.

These courses are designed to provide the non-science student with an insight into the nature and scope of modern mathematics.

105. A study of set theory and cardinality, number theory and abstract algebra and topics from topology and matrix theory.

106. A study of computer programming, probability and topics from analysis, game theory and linear programming.

201-202-203. Calculus with Analytic Geometry. *Fall and Spring* (3,3,3) Staff. *Prerequisite: Math 103 or its equivalent.* (Entering freshmen with good training in trigonometry are urged to begin with Math 201; not offered after summer 1971.)

201. Inequalities, absolute values and analytics through conics. Sets, ordered pairs and functions leading to limits and derivatives of algebraic and transcendental functions including applications to maxima, minima, plane motion and Law of the Mean Value. Differentials and their applications.

202. The definite integral and the Fundamental Theorem of Integral Calculus and their applications to areas, volumes, work, first moments and centroids including improper integrals and solids of revolution. Techniques of integration, parametric equations, polar coordinates and vectors.

203. Sequences and series including Taylor's and Maclaurin's series and convergence. Solid analytic geometry and partial differentiation with applications. L'Hospital's Rule.

302. Ordinary Differential Equations. *Fall and Spring* (3) Staff. *Prerequisite: Math 203 or the consent of the head of the department.*

First order differential equations. Initial value problem. Second order linear differential equations. Systems of linear differential equations. Laplace transform.

305. Linear Algebra. *Fall* (3) Staff. *Prerequisite: Math 203 or consent of the Head of the Department.*

An introduction into the study of Abstract Algebra beginning with systems of linear equations, linear transformations, determinants and matrices, placing the main emphasis on the study of vector spaces. This course is recommended for teachers of secondary mathematics. (Not offered after summer 1971.)

307. Algebra. *Spring* (3) Staff. *Prerequisite: Math 305.*

Sets, logic and introduction to groups, rings and fields. Properties of the number systems, congruences, polynomials and their applications to theory of equations. Recommended for teachers of secondary mathematics. (Not offered after summer 1971.)

***308. Geometry.** *Spring* (3) Mr. Reynolds. *Prerequisite: Math. 307.*

Axioms and deductive reasoning. Some advanced Euclidean geometry including cross ratio and axiomatic systems; synthetic and coordinate projective geometry; duality; perspectivity; conics. Recommended for prospective teachers.

311-312. Advanced Calculus. *Fall and Spring* (3,3) Staff. *Prerequisite: Math 203, Corequisite: Math 302.*

Functions of several variables, directional derivative, operations with Taylor's series and series in several variables, uniform convergence, Green's and Stokes' Theorems and other topics chosen from classical analysis.

†401-402. **Probability and Statistics.** *Fall and Spring* (3,3) Mr. Rabinowitz. *Prerequisite: Math 312.*

First semester topics include: combinatorial analysis, Bayes's Theorem, discrete and continuous probability distributions and characteristics of distributions. The second semester deals with statistical inference theory and applications including sampling from probability distributions, estimation, hypothesis testing, confidence methods, regression analysis, experimental designs, and non-parametric statistics.

†403-404. **Intermediate Analysis.** *Fall and Spring* (3,3) Mr. Bynum. *Prerequisite: 312.*

Set theory; the real number systems; analysis in metric spaces including continuity and convergence with emphasis on Euclidean spaces; normed linear spaces; integration and differentiation theory.

†405-406. **Complex Analysis.** *Fall and Spring* (3,3) Mr. Cato. *Prerequisite: Math 312.*

The complex plane, analytic functions, Cauchy integral theory and the calculus of residues, Taylor and Laurent series; analytic continuation; conformal mapping and boundary value problems.

†407-408. **Abstract Algebra.** *Fall and Spring* (3,3) Mr. Prosl. *Prerequisites: Math 305, 307.*

Groups, rings, isomorphism theorems, polynomials, modules, vector spaces; linear transformations, matrices, Jordan and other canonical forms, quadratic forms.

†410. **Special Topics.** *Fall or Spring* (1, 2 or 3 depending upon material covered.) Staff.

Topics selected from Theory of Equation, Projective Geometry, Linear Algebra, Intermediate Analysis, Applied Mathematics, etc.

†412. **Introduction to Number Theory.** *Fall* (3) Mr. Reynolds. *Prerequisite: Math. 307.*

An elementary course in the theory of integers, divisibility and prime numbers; a study of Diophantine equations, congruences, number theoretical functions, decimal expansion of rational numbers and

quadratic residues included. Recommended for prospective secondary teachers of mathematics.

†413-414. **Topics in Numerical Analysis.** *Fall and Spring (3,3)* Mr. Southworth. *Prerequisites: Math 302, 305 and computer programming.*

The topics to be discussed the first semester are roots of equations, solutions of systems of linear equations by matrix methods, eigenvalues and eigenvectors of matrices, interpolation, numerical evaluation of integrals, and numerical differentiation.

The second semester topics include empirical data curve fitting, integration of systems of ordinary differential equations of both the initial value and boundary value type.

431. **Mathematical Theory of Finite Automata.** *Fall (3)* Staff. *Prerequisite: A course in abstract algebra.*

The algebraic theory of sequential machines; behavior of finite automata. The equivalence of deterministic and nondeterministic automata. The Analysis and Synthesis theorems. Regular expressions. Compatible states and algorithms for constructing minimal state machines.

432. **Introduction to the Theory of Computability.** *Spring (3)* Staff. *Prerequisite: Math 431.*

The notion of an effective process; equivalence of several classes of machines, Turing machines, Markov Algorithms, recursive functions. Church's Thesis.

Engineering Graphics 201-202. Engineering Drawing and Descriptive Geometry. *Fall and Spring (3,3)* Mr. Smith.

Fundamentals of Engineering Drawing and Descriptive Geometry. Orthographic projection, auxiliary views. Isometric, oblique projection and drawing; perspective; machine parts such as screws, gears, valves, cams. Lettering. Graphic and analytic solutions of engineering and geometric problems. Intersection and development of surfaces. *Six class and laboratory hours.*

COMPUTER SCIENCE

The following courses are classified as elective courses and not properly speaking a part of the mathematics program, and will not be

counted in the maximum of 42 hours in a subject field. Credit will not be allowed for both C.S. 230 and C.S. 240.

C.S. 230. Elementary Computer Programming. *Fall or Spring* (2,2) Mr. Smith.

Introduction to computer languages, including Fortran and assembly language with emphasis on the former. Open to all students.

C.S. 240. Computer Programming and Problem Solving. *Fall and Spring* (3,3) Mr. Poole.

The solution of computational problems by use of digital computers. Subjects covered are the development of mathematical models, the concept of algorithms, the use of flow charts in describing computational processes, and the concept and use of programming languages, including FORTRAN and an algorithmic language such as ALGOL.

C.S. 331-332. Computer Organization. *Fall and Spring* (3,3) Mr. Gibbs. *Prerequisite:* C.S. 240.

Topics include PL/I, machine language programming, symbolic code, complement and floating point arithmetic, hardware organization, addressing, indexing, interrupts, loading, relocation, and subroutines. The IMB System/360 assembler language will be studied.

In the second term, macros, interpretation, simulation, microprogramming, I/O devices, buffering, detailed anatomy of a two-pass assembler, and searching and sorting will be covered. A brief introduction to compiling will be presented.

MASTER OF ARTS AND MASTER OF SCIENCE DEGREES IN MATHEMATICS

Requirements for admission are listed on pages 84-86 of this catalog. Candidates for the degree of Master of Arts and Master of Science in Mathematics must meet the following requirements in addition to the general requirements stated on pages 106-107 of this catalog.

1. After consultation with the Mathematics Department, the student may be required to take undergraduate courses in which his preparation is judged inadequate.

2. The student must demonstrate a reading knowledge of French, German or Russian, in the field of mathematics, at least one semester prior to qualifying for the degree.

3. Each candidate must pass a comprehensive examination to be taken at least two weeks before regular semester examinations. This examination shall be given only after the total semester credits required have been completed or in the semester in which these credits will be completed.

4. For the Master of Arts degree, in addition to Math. 560 (Thesis), the candidate must successfully complete 24 semester credits in courses numbered above 400 including at least 12 semester credits in courses limited to graduate students (500 level). He will also have a faculty supervisor who will be primarily responsible for the student's choice of a thesis subject and for advising him regarding research and writing problems encountered in preparing his thesis.

5. For the Master of Science degree, the student must take a total of 32 semester credits consisting of 20 or more credits at the 500 level.

GRADUATE COURSES

†501-502. **Modern Abstract Algebra.** *Fall and Spring* (3,3) Mr. Sanwal. *Prerequisite: Math 307 or its equivalent.*

†503-504. **Analysis.** *Fall and Spring* (3,3) Mr. Stanford. *Prerequisite: Math 312.*

†505-506. **Topology.** *Fall and Spring* (3,3) Mr. O'Neil.

†509-510. **Partial Differential Equations.** *Fall and Spring* (3,3) Mr. Lawrence. *Prerequisite: Math 312.*

†511-512. **Approximation Theory.** *Fall and Spring* (3,3) Staff. *Corequisite: 509-510.*

Math 521-522. Mathematical Methods in Applied Science. *Fall and Spring* (3,3) Staff. *Prerequisite: A course in advanced calculus.*

Math 523. Calculus of Variations. *Fall* (3). Mr. Melvin. *Prerequisite: consent of the Instructor.*

Math 524. Mathematical Theory of Optimization. *Spring* (3) Mr. Melvin. *Prerequisite: consent of the Instructor.*

Math 529. Linear Algebra. *Fall* (3) Mr. Rublein. *Prerequisite: Math 307.*

Math 530. Applications of Linear Algebra. *Spring* (3) Mr. Rublein. *Prerequisite: Math 529 or consent of the Instructor.*

Math 531-532. Probability and Statistics. *Fall and Spring* (3,3) Mr. Rabinowitz. *Prerequisite: Math 401-402.*

Math 541-542. Theory of Ordinary Differential Equations. *Fall and Spring* (3,3) Mr. Drew. *Prerequisite: Consent of the Instructor.*

†551. **Readings in Algebra and Number Theory.** *Fall or Spring* (1, 2 or 3 depending upon material covered.) Mr. Reynolds.

†552. **Readings in Analysis I.** *Fall or Spring* (1, 2, or 3 depending upon material covered.) Staff.

†553. **Readings in Analysis II.** *Fall or Spring* (1, 2, or 3 depending upon material covered.) Staff.

†554. **Readings in Topology.** *Fall or Spring* (1, 2, or 3 depending upon material covered.) Staff.

†555. **Readings in Applied Mathematics.** *Fall or Spring* (1, 2, or 3 depending upon material covered.) Staff.

†560. **Thesis.** Hours to be arranged. Staff.

†585. **Research.** *Fall and Spring.* Hours and credits to be arranged. Staff.

For additional graduate courses with strong mathematical content, see the Applied Science program on pages 258-260 of this catalog.

Military Science (Army)

PROFESSOR COLONEL HODGES (*Chairman of the Department*). ASSISTANT PROFESSORS MAJOR POWELL, MAJOR SWARDELL, MAJOR ELLERSON AND CAPTAIN SISCO.

A unit of the Reserve Officers' Training Corps was established at the College of William and Mary on July 1, 1947, with an assigned mission to qualify students for positions of leadership and management in the Armed Forces in time of national emergency.

The courses are designed specifically to educate students in General Military Science. The GMS course gives the student a college level program of general military subjects, teaches him the fundamentals of leadership, and provides him an opportunity to perfect his leadership and management techniques by practical application.

Any male student who is a citizen of the United States, physically qualified, and not already holding a commission in any of the Armed Forces may, when he matriculates, enroll in Military Science 101.¹ Those meeting the above qualifications but who have had prior military experience, whether in the Armed Forces or in another college, may, commensurate with the degree of such experience, enroll in Military Science I through IV.² Transfer students desiring to take advantage of previous military courses should consult the Professor of Military Science when they matriculate.

Having completed satisfactorily the first four semesters or its equivalent, and having demonstrated the traits of character and leadership ability which justify his further training as a candidate for a commission, a student who also has an adequate academic standing becomes an eligible candidate for admission to the advanced course (Military

¹ Students who enroll in Military 101 will be required to complete Military Science 101 through 202 in order to receive college credit for any part of the two-year period. In like manner, students who enroll in Military Science 301 will be required to complete Military Science 301 through 402 in order to receive college credit. However, in cases where a student is forced to drop ROTC because of physical disability or other bona fide reasons beyond his control, the Professor of Military Science may, at his discretion, recommend to the college authorities that the student be given credit for a part of or all of his completed work.

² For those students desiring to participate, there is a 2 year program available beginning with the summer prior to the junior year and extending through the completion of the senior year. Details available at the office of the Department of Military Science.

Science 301 through 402). Those who complete this course may, upon graduation from the College, be commissioned as Second Lieutenants, United States Army Reserve. Outstanding ROTC cadets will be offered a commission in the Regular Army under the provisions of the Distinguished Military Graduate Program. Beginning in fall 1971 entering ROTC students will be required to participate in a weekly two hour Leadership Laboratory and in their second academic year enroll in MS 202, a three credit hour course. Upon selection for continued participation in the Advanced Course, students will enroll in MS 302, also a three credit hour course, the weekly Leadership and Management Laboratory continuing throughout four academic years except as pertains to the two year program.

Freshman and sophomore students are furnished standard government issue uniforms. Those who enroll in the advanced course receive tailored officer-type uniforms. Students enrolled in the advanced course become members of the Enlisted Reserve and receive an allowance of \$50.00 per month. Advanced course students are required to attend summer camp for a period of six weeks, normally between their third and fourth years at college¹ and are paid one half of a second lieutenant's salary during that period. They also receive travel pay to and from camp, and while there, are rationed and quartered at government expense.

The Professor of Military Science may grant a temporary draft deferment to any student enrolled in ROTC. This deferment will defer the student from induction for training and service under the Universal Military Training and Service Act until he has completed his college education.

Current regulations also permit a delay in the active duty training of newly commissioned students who have been accepted for graduate work in a recognized field and who have applied for such delay.

Army ROTC Scholarship Program. This program offers free tuition, textbooks and fees in addition to paying an allowance of \$50.00 per month for the period that the scholarship is in effect. Scholarships are provided under provisions of Public Law 88-647, The ROTC Vitalization Act of 1964. Four year scholarships are awarded to outstanding high school seniors and interested students are encouraged to write the Army Headquarters in their area if high school counselors do not

¹ Two year program cadets must attend two (2) summer camps. Details available at the office of the Department of Military Science.

have information on the program. One, two and three year scholarships may be applied for through the Professor of Military Science.

Extracurricular Activities.

The Queen's Guard. A special unit of the ROTC established in 1961, outfitted with special uniforms and trained in appropriate drills and ceremonies as will represent the College of William and Mary and Virginia on such occasions and in such events as may be approved by the President. Sixty-two selected cadets, to include the Cadet Drum and Bugle Corps, comprise this elite organization named in honor of three queens of Great Britain, Mary II, Anne and Elizabeth II, who have given royal recognition and patronage to the College.

Flight Training. A Federal Aeronautics Administration approved flight training program of approximately 35 hours ground training and 36½ hours flight instruction conducted by civilian flight contract is offered to selected senior ROTC cadets.

Scabbard and Blade is an honorary military leadership society. A cadet elected to the society must be a junior or senior holding the rank of a cadet officer. The purpose of the society is to foster the development of Army Officers.

The Annual Military Ball is one of the outstanding social events on the campus and is open to all ROTC cadets.

DESCRIPTION OF COURSES

101-102. Military Science I. Fall and Spring (1,1) Major Swardell.

An analysis of American Military History with emphasis on principles of war, development of tactics and evolution of the present military system. *Two hours leadership and management laboratory.*

201-202. Military Science II. Fall and Spring (2,2) Captain Sisco. *Prerequisites: MS 101-102.*

A study of map and aerial photograph interpretation with primary attention given to the principles of military terrain evaluation and land navigation; the basic concepts of military operations and tactics. *Two hours leadership and management laboratory.*

***301-302. Military Science III. Fall and Spring (1,3) Major El- lerson.**

An analysis of the principles of military leadership and management; fundamentals of military methods of instruction. A study of management and control of small unit operations with special emphasis given to small unit tactics and communication systems. *Two hours leadership and management laboratory.*

401-402. Military Science IV. *Fall and Spring* (3,1) Major Powell.

Analysis of selected leadership and management problems involved in administration, military justice, and tactics; the impact of the contemporary world scene on leadership and management problems of the military services. *Two hours leadership and management laboratory.*

Modern Languages¹

PROFESSORS BANNER (*Chairman of the Department*), HOFFMAN, KALLOS, MOORE, OUSTINOFF, STONE. ASSOCIATE PROFESSORS COKE, KURTZ, LAVIN, MARTEL,² ZIMMERMAN. ASSISTANT PROFESSORS BACKHAUS, DIDUK, GOFF, HALLETT, KELLEY, KILLEN, NETICK, SAINT-ONGE, G. SMITH, J. SMITH, TYLER. INSTRUCTORS BASSO, BLOUNT, FLOYD, HUNSUCKER, MORELAND, O'NEIL, PALMAZ, WELCH, WOOTEN.

Courses in the 100³ and 200 groups are designed to give a well-rounded linguistic experience, including the spoken as well as the written language, and to develop an awareness and appreciation of other cultures. Supervised language laboratory is an integral part of courses 101 and 102; three class meetings and two hours in the language laboratory.

Courses in the 300 and 400 groups are designed to give further experience in the principal facets of language study, a reasonable knowledge of the literature, some experience in literary criticism, to the end that the student may experience in some degree the humanizing process which derives from the study and understanding of foreign languages and cultures. Courses in general are conducted in the foreign language.

Students concentrating within the area of Modern Languages are required to take at least six credits in an Ancient language.

FRENCH

REQUIREMENTS FOR CONCENTRATION

The following courses are required for concentration in French, and should be taken in this order: French 301, 304, 305 and 312; also, either 401 or 402 and either 411 or 412; a minimum of nine additional hours will be chosen from among the 300 and 400 courses.

¹ The distribution requirements for foreign languages are indicated on page 97. All language requirements for a degree should be begun in the freshman year.

² On leave of absence 1970-71.

³ No credit will be counted toward a degree for the first semester of an elementary foreign language unless followed by the successful completion of the second semester of that language.

Students planning to concentrate in French are advised to choose Latin to satisfy the requirement of at least 6 semester credits in an Ancient Language.

DESCRIPTION OF COURSES

101-102. Elementary French. *Fall and Spring (4,4) Staff.*

Students who have acquired 2 high school credits in French may not take French 101-102 for credit. *Three class hours, two laboratory hours.*

201, 202. Intermediate Level. *Fall and Spring (3,3) Staff. Prerequisite: two high school units for 201, three high school units for 202 or the equivalent. Students who have acquired three high school units in French may not take 201 for credit.*

A review and continuation of the study of French grammar, incorporated with the continued development of reading, writing, speaking and comprehension skills.

205. Intermediate Composition and Conversation. *Fall and Spring (3) Staff. Prerequisite: French 202 or the equivalent.*

Review of main principles of syntax. Composition.

206. Intermediate Conversation. *Fall and Spring (3) Staff. Prerequisite: French 205 or the equivalent.*

Phonetics; intensive oral-aural training.

207. Advanced Reading in French Literature. *Fall (3) Staff. Prerequisite: four high school units or 202 or the equivalent.*

Selected readings from the literature of the seventeenth, eighteenth, nineteenth and twentieth centuries. A reading course designed as an introductory step to the 300 courses in literature.

208. The French Heritage. *Spring (3) Staff. Prerequisite: four high school units or 202 or the equivalent.*

***209. Introduction to French Literature from 1494 to 1815.** *Fall (3) Mr. Killen and Mr. Oustinoff. Prerequisite: four high school units or 202 or the equivalent.*

Study of the historical development of the literary genres from the beginning of the Renaissance to the end of the 18th century.

***210. Introduction to French Literature from 1815 to 1930.**

Spring (3) Mr. Killen and Mr. Oustinoff. *Prerequisite: French 209 or the equivalent.*

Study of the historical development of the literary genres from 1815 to 1930.

297. Contemporary French Theatre in English Translation. *Fall* (3) Staff. *Not open to concentrators in French.*

A study of trends in the Modern French Theatre with special reference to significant dramatists such as Giraudoux, Anouilh, and Sartre.

298. Contemporary French Novel in English Translation. *Spring* (3) Staff. *Not open to concentrators in French.*

A study of trends in the Modern French Novel with special reference to significant authors such as Gide, Saint Exupéry and Camus.

301. Seventeenth-Century French Literature I. *Fall* (3) Mr. Killen and Mr. Tyler. *Prerequisite: French 207 or 209 or 210 or the equivalent.* Required of all concentrators.

Dramatic literature of the seventeenth century, emphasizing the major works of Corneille, Moliere, and Racine.

302. Seventeenth-Century French Literature II. *Spring* (3) Mr. Tyler. *Prerequisite: French 207 or 209 or 210 or the equivalent.*

Non-dramatic literature of the seventeenth century: the baroque poets, Malherbe, Pascal, La Fontaine, Boileau and other major writers of the period.

304. Advanced Grammar and Composition. *Spring* (3) Mr. St.-Onge. *Prerequisite: French 205 and another 200 course or the equivalent.* Required of all concentrators.

Advanced syntax and intensive written work.

305. Advanced Conversation I. *Fall* (3) Mr. St.-Onge. *Prerequisite: French 206 or another 200 course or the equivalent.* Required of all concentrators.

Advanced intensive oral-aural training.

306. Advanced Conversation II. *Spring* (3) Mr. St.-Onge. *Prerequisite: French 305 or the equivalent.*

Advanced intensive oral-aural training.

307. French Phonetics and Diction. *Fall* (3) Mr. Oustinoff. *Prerequisite: French 206 and another 200 course or the equivalent.* This course may be taken concurrently with French 305. Recommended for students who expect to teach French in high school.

Intensive study of phonetics, with particular attention given to the exceptions to the "rules" of French pronunciation and to individual problems.

311. Eighteenth-Century French Literature I. *Fall* (3) Staff. *Prerequisite: French 207 or 209 or 210 or the equivalent.*

The novel and the theatre of the eighteenth century.

312. Eighteenth-Century French Literature II. *Spring* (3) Mr. Coke. *Prerequisite: French 207 or 209 or 210 or the equivalent.* Required of all concentrators.

Study of the major writers of the French Enlightenment: Montesquieu, Voltaire, Diderot, Rousseau and others.

401. Nineteenth-Century French Literature I. *Fall* (3) Mr. St.-Onge. *Prerequisite: French 209 or 210 or the equivalent.* Concentrators must take either French 401 or 402.

Study of the major romantic writers in French.

402. Nineteenth-Century French Literature II. *Spring* (3) Mr. Oustinoff. *Prerequisite: French 209 or 210 or the equivalent.* Concentrators must take either 401 or 402.

The novel of the nineteenth century with special emphasis on Balzac, Stendhal, Flaubert and Zola.

404. French Poetry from Baudelaire to Apollinaire. *Spring* (3) Mr. St.-Onge. *Prerequisite: French 401 or at least nine hours of 300 literature courses or the equivalent.*

The post-romantic poets in France, with emphasis on Baudelaire and the Symbolists.

***405. Advanced Writing in French.** *Fall* (3) Staff. *Prerequisite: French 304 or the equivalent.*

An intensive course in writing and language analysis.

411. Twentieth-Century French Literature I. *Fall* (3) Mr. Oustinoff. *Prerequisite: French 209 or 210 or the equivalent.* Concentrators must take either 411 or 412.

Study of representative writers and works up to 1939.

412. Twentieth-Century French Literature II. *Spring* (3) Mr. Killen. *Prerequisite: French 209 or 210 or the equivalent.* Concentrators must take either 411 or 412.

Study of representative writers and works since 1939; existential literature, the new novel, the theatre of the absurd.

422. Literature of the Middle Ages. *Spring* (3) Staff. *Prerequisite: French 209 or 210 or the equivalent.*

Study of French literature up to 1500; representative works. (Most texts are read in modern French translation.)

423. Renaissance Literature. *Fall* (3) Staff. *Prerequisite: French 209 or 210 or the equivalent.*

Study of the major writers of the French Renaissance.

431. The French Theatre. *Fall* (3) Staff. *Prerequisite: Concentrators must have completed nine hours of 300 or 400 literature courses; non-concentrators must have the consent of the instructor.*

A critical study of the development of the theatre in France from the Renaissance to modern times.

432. The Novel in France. *Spring* (3) Staff. *Prerequisite: Concentrators must have completed at least nine hours of 300 or 400 literature courses; non-concentrators must have the consent of the instructor.*

A critical study of the development of the novel in France.

450. Seminar in French Literature. *Fall and Spring* (3) Staff. *Prerequisite: at least nine hours of 300 or 400 literature courses and Senior standing.*

Recommended for concentrators who expect to continue with graduate study. A study in depth of a limited literary topic. Students will write and present papers for critical discussion.

495-496. Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Honors Study in Modern Languages will be enrolled in this course during both semesters of their senior year. The course comprises (a) supervised reading of a general bibliography in the language and literature of the student's field of concentration; (b) supervised reading of a special bibliography in the student's field of

special interest; (c) presentation by May 1 of a satisfactory Honors Essay in the field of the student's major interest; and (d) satisfactory performance in a comprehensive oral examination in the field of the student's major interest.

GERMAN

REQUIREMENTS FOR CONCENTRATION

Twenty-seven semester credits are required for concentration in German including German 207, 208, 301, 302, 305 and three of the following courses: 401, 402, 403 and 404. These courses are also open to qualified students who are not concentrating in German.

DESCRIPTION OF COURSES

101-102. Elementary German. *Fall and Spring* (4,4) Staff. Students who have acquired two high school units in German may not take German 101-102 for credit.

Training in pronunciation, aural-oral comprehension with the use of audio-visual techniques. *Three class hours, two laboratory hours.*

201. Graded Readings in German Prose. *Fall* (3) Staff. *Prerequisites: German 101 and 102 or the equivalent.*

A grammar review with prose readings.

202. Readings in Masterpieces of German Literature. *Fall and Spring* (3) Staff. *Prerequisite: three high school units or 201 or the equivalent.*

Selected readings from the masterpieces of German literature.

204. Scientific German. *Fall and Spring* (3) Mr. G. Smith. *Prerequisite: German 201 or the equivalent.*

Reading of scientific texts in chemistry, physics, biology, and general science.

205. Intermediate Grammar and Composition. *Fall and Spring* (3) Miss Backhaus, Mr. Kallos. *Prerequisite: four high school units or 202 or the equivalent.*

Review of main principles of syntax; composition.

206. Intermediate Conversation. *Fall and Spring* (3) Mrs. Diduk. *Prerequisite: German 205 or the equivalent.*

Phonetics; intensive oral-aural training.

207. The German-Speaking Peoples and Their Civilization. *Fall and Spring* (3) Mrs. Diduk, Mrs. O'Neil. *Prerequisite: four high school units or 202 or the equivalent.*

Reading course embodying the most important elements of Germanic Civilization, designed as an introductory step to the 300 courses.

208. Introduction to German Literature. *Fall and Spring* (3) Mr. J. Smith. *Prerequisite: German 207 or the equivalent.*

A study and discussion of the representative genres of German literature, designed as an introductory step to the 300 courses.

297, 298. Survey of Twentieth Century German Literature in English. *Fall and Spring* (3,3) Mr. Kallos. *Not open to concentrators in German.*

A survey of twentieth-century masterpieces of German literature. First semester: the novel and novelle; second semester: drama and poetry.

301. German Classicism. *Fall* (3) Miss Backhaus. *Prerequisite: German 208 or the equivalent.*

Reading and interpretation of the chief works of Lessing, Goethe, and Schiller.

302. Survey of German Literature. *Spring* (3) Mr. Kurtz. *Prerequisite: German 301 or the equivalent.*

Main currents of German literature from its origin through the Baroque period; study of representative works.

305. Advanced German Composition and Conversation. *Spring* (3) Miss Backhaus. *Prerequisite: German 205 and 206 or the equivalent.*

397, 398. Contemporary German Authors in English Translation. *Fall and Spring* (3,3) Staff. *Not open to concentrators in German.*

The study in depth of a significant German writer of modern times. First semester: Hermann Hesse; second semester: Franz Kafka.

401. From Romanticism to Poetic Realism. *Fall* (3) Mr. Zimmerman. *Prerequisite: German 301 or 302.*

The Romantic Schools, political writers, the "Young Germany"

circle, poetic realism, naturalism, impressionism; reading and interpretation of representative works.

402. Modern German Literature. *Spring* (3) Mr. Kallos. *Prerequisite: German 401 or the equivalent.*

Principal literary trends; reading and interpretation of representative works.

403. German Poetry. *Fall* (3) Mr. Kallos. *Prerequisite: German 402 or the equivalent.*

Reading and interpretation of outstanding poetic works from the eighteenth century to the present.

404. The Faust Sagas and Goethe's Faust. *Spring* (3) Mr. Zimmerman. *Prerequisite: German 403 or the equivalent.*

Reading and interpretation of Goethe's *Faust* (First Part), and a study of its historical background and sources.

495-496. Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Honors Study in Modern Languages will be enrolled in this course during both semesters of their senior year. The course comprises (a) supervised reading of a general bibliography in the language and literature of the student's field of concentration; (b) supervised reading of a special bibliography in the field of the student's major interest; (c) presentation by May 1 of a satisfactory Honors Essay in the field of the student's major interest; and (d) satisfactory performance in a comprehensive oral examination in the field of the student's major interest.

ITALIAN

101-102. Elementary Italian. *Fall and Spring* (4,4) Staff. Students who have acquired two high school units of Italian may not take Italian 101-102 for credit.

Training in pronunciation, aural-oral comprehension with use of audio-visual techniques. *Three class hours, two laboratory hours.*

201. Intermediate Italian. *Fall* (3) Miss Basso. *Prerequisites: Italian 101 and 102 or the equivalent.*

A reading course which includes composition and oral practice.

202. Readings in Italian Literature. *Spring* (3) Miss Basso. *Prerequisite: Italian 201 or the equivalent.*

Selected readings from the literature of the eighteenth, nineteenth and twentieth centuries.

301. Survey of Italian Literature from the Beginning to 1700. *Fall* (3) Mr. Coke. *Prerequisite: four high school units or 202 or the equivalent.*

Survey of Italian Literature up to 1700. Study of representative works.

302. Italian Literature from 1700 to the Present Time. *Spring* (3) Mr. Coke. *Prerequisite: Italian 301 or the equivalent.*

Survey of Italian Literature up to 1950. Study of representative works.

RUSSIAN

101-102. Elementary Russian. *Fall and Spring* (4,4) Mrs. Netick. Students who have acquired two high school units of Russian may not take Russian 101-102 for credit.

Training in pronunciation, aural-oral comprehension with use of audio-visual techniques.

201. Intermediate Russian. *Fall* (3) Mrs. Netick. *Prerequisites: Russian 101 and 102 or the equivalent.*

Review of the fundamentals of grammar and pronunciation and reading of moderately difficult texts.

202. Readings in Masterpieces of Russian Literature. *Spring* (3) Mrs. Netick. *Prerequisite: Russian 201 or the equivalent.*

Selected readings from Russian literature of the 19th century.

297, 298. Survey of Russian Literature in English. *Fall and Spring* (3,3) Mrs. Netick.

A chronological survey of Russian literature from its beginning to the Soviet Period, with emphasis given to the major writers of the 19th century.

301. Survey of Russian Literature from the Beginning to 1850. *Fall* (3) Mrs. Netick. *Prerequisite: four high school units or 202 or the equivalent.*

Survey of literature up to 1850. Study of representative works.

302. Survey of Russian Literature from 1850 to the Present. *Spring* (3) Mrs. Netick. *Prerequisite: Russian 301 or the equivalent.*

Survey of Russian literature from 1850 to the present. Study of representative works.

SPANISH

REQUIREMENTS FOR CONCENTRATION

The following courses are required for concentration in Spanish; and should be taken in this order: 301, 302, 303, 305, 306 and four of the following courses: 401, 402, 403, 404, 405, 406.

Students planning to concentrate in Spanish are advised to choose Latin to satisfy the requirement of at least six semester credits in an Ancient Language.

DESCRIPTION OF COURSES

101-102. Elementary Spanish. *Fall and Spring* (4,4) Staff. Students who have acquired two high school units in Spanish may not take Spanish 101-102 for credit.

Training in pronunciations, aural-oral comprehension with the use of audio-visual techniques. *Three class hours, two laboratory hours.*

201. Intermediate Spanish Reading. *Fall and Spring* (3) Staff. *Prerequisite: two high school units or the equivalent. Students who have acquired three high school units in Spanish may not take 201 for credit.*

A reading course which includes a grammar review.

202. Readings in Modern Literature. *Fall and Spring* (3) Staff. *Prerequisite: three high school units or Spanish 201 or the equivalent.*

Selected readings from the literature of the nineteenth and twentieth centuries.

205. Intermediate Grammar and Composition. *Fall and Spring* (3) Mr. Banner. *Prerequisite: Spanish 202 or the equivalent.*

Review of main principles of syntax; composition.

206. Intermediate Conversation. *Fall and Spring* (3) Mr. Lavin. *Prerequisite: Spanish 205 or the equivalent.*

Phonetics; intensive oral-aural training.

207. The Spanish Heritage. *Fall* (3) Staff. *Prerequisite: four high school units or 202 or the equivalent.*

Reading course embodying the most important elements of Hispanic civilization, designed as an introductory step to the 300 courses in literature.

208. Readings in Masterpieces of Spanish Literature. *Spring* (3) Staff. *Prerequisite: four high school units or 202 or the equivalent.*

Selected reading from Spanish literature from the beginning to the present. A reading course designed as an introductory step to 300 courses in literature.

297. Cervantes in English Translation. *Fall* (3) Mr. Moore. *Not open to concentrators in Spanish.*

A study of the life and works of Cervantes. The main focus will be on the interpretation of *Don Quixote*.

298. Selected Spanish Authors in English Translation: Federico García Lorca. *Spring* (3) Mr. Goff. *Not open to concentrators in Spanish.*

An intensive study of the drama and poetry of Federico Lorca.

301. Spanish Literature from the Beginning to 1700. *Fall* (3) Mr. Moore. *Prerequisite: Spanish 207 or 208 or the equivalent.*

Survey of Spanish literature from its beginning to the end of the Golden Age. Study of representative works.

302. Spanish Literature from 1700 to the Present Time. *Spring* (3) Mr. Banner. *Prerequisite: Spanish 301 or the equivalent.*

Survey of Spanish literature from 1700 to the present. Study of representative works.

303. Advanced Grammar and Composition. *Spring* (3) Mr. Stone. *Prerequisite: Spanish 205 and another 200 course or the equivalent.*

Advanced syntax and intensive written work.

305, 306. Advanced Conversation. *Fall and Spring* (3,3) Mr. Stone. *Prerequisite: Spanish 206 and another 200 course or the equivalent.*

Advanced intensive oral-aural training.

401. The Novel. *Fall* (3) Mr. Stone. *Prerequisite: Spanish 301 and 302 or the equivalent.*

Survey of the early novel with detailed study of the modern novel since Romanticism. Study of representative works.

402. Drama of the Golden Age. *Fall* (3) Mr. Lavin. *Prerequisite: Spanish 301 and 302 or the equivalent.*

Survey of the drama from its beginning. Detailed study of the drama of the Golden Age. Study of representative works.

403. Cervantes. *Spring* (3) Mr. Moore. *Prerequisite: Spanish 301 and 302 or the equivalent.*

The life and works of Cervantes with particular emphasis on the Quijote and the Novelas Ejemplares.

404. Drama of the 19th and 20th Centuries. *Spring* (3) Mr. Banner. *Prerequisite: Spanish 301 and 302 or the equivalent.*

Principal movements and authors in the drama of the 19th and 20th centuries. Study of representative works.

405. Directed Reading in Spanish Literature. *Fall* (3) Mr. Banner. *Prerequisite: Spanish 301 and 302 or the equivalent.*

This course is designed to permit the student to pursue in depth an area of literature in which he has a major interest.

406. Survey of Spanish American Literature. *Spring* (3) Mr. Hoffman. *Prerequisite: Spanish 301 and 302 or the equivalent.*

Principal literary movements in Spanish America. Study of representative works.

495-496. Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Honors Study in Modern Languages will be enrolled in this course during both semesters of their senior year. The course comprises (a) supervised reading of a general bibliography in the language and literature of the student's field of concentration; (b) supervised reading of a special bibliography in the field of the student's major interest; (c) presentation by May 1 of a satisfactory Honors Essay in the field of the student's major interest; and (d) satisfactory performance in a comprehensive oral examination in the field of the student's major interest.

Music

PROFESSORS TRUESDELL (*Chairman of the Department*), FEHR, STEWART, AND VARNER. ASSOCIATE PROFESSOR PALEDES. LECTURERS DARLING, KOLLER, LENDVAY AND ROARK.

The Department of Music offers concentration in music appropriate for (1) prospective school music teachers; (2) students who desire a broad liberal arts program as cultural enrichment with the emphasis on music in combination with the other arts and humanities; and (3) students who desire a liberal arts base for later advanced specialization; *i.e.*, musicologist, composer, music librarian and college music teacher.

REQUIREMENTS FOR CONCENTRATION

The basic requirements for concentration in Music include 12 credits in Music Theory (Music 201, 202, 301, and 302); 6 credits in Music History (Music 311 and 312); 8 credits in Applied Music Instruction, not less than 6 credits in one field; and other credits in music for a maximum aggregate of 42 as indicated in the special concentration programs or in consultation with the Head of the Department. Proficiency at the Elementary Piano level is considered basic to all programs and is a requirement for graduation. All concentrators in Music are expected to participate in a senior recital, in lieu of which a term paper, an instrumental or choral arranging project, or an original musical composition may be accepted.

Concentrators in Music are required to complete Senior level Applied Music Instruction courses in their major applied music field for graduation. In addition, they should complete courses in both instrumental and vocal techniques.

Students preparing for the Virginia State College Professional Certificate are required by the Virginia Board of Education to qualify in general as indicated in the Education section of this catalog. Upgraded secondary specific endorsement requirements effective July 1, 1968 may be met if Theory and Applied Music Instruction are begun as early as possible. Seldom can these requirements be met in less than a three year period.

SPECIAL CONCENTRATION PROGRAMS IN PREPARATION FOR THE VIRGINIA COLLEGIATE PROFESSIONAL CERTIFICATE IN MUSIC

Applied Music Ensemble	2-3	
Music 327—Choral Conducting	}	1
or		
Music 328—Instrumental Conducting	}	3
Music 321—Music in the Elementary School		
or		
Music 322—Music in the Secondary School	}	6-7
Music 323, 324, 325—Instrumental Techniques		
or		
2 Semesters of Instrumental Techniques		
and	}	16-17
Music 326—Choral Material and Procedures		

RECOMMENDED PROGRAMS FOR THE FIRST TWO YEARS

FRESHMAN YEAR

English 101, 102	6
Foreign Language	6-8
Physics 103, 104 is recommended; or Biology, Chemistry, or Geology	8
Music 201, 202—Theory I	6
Applied Music Instruction	2
Physical Education	2

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SOPHOMORE YEAR

English 201, 202	6
Foreign Language	6
History 101, 102	6
Music 301, 302—Theory II	6
Music 323, 324—Instrumental Techniques	4
Applied Music Instruction (Piano)	2
Physical Education	2
Applied Music Ensemble	2

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Special concentration programs are available in Theory and Music History and Literature.

DESCRIPTION OF COURSES

THEORY

101. Introduction to Theory. *Fall* (2) Mr. Stewart.

Fundamental terms and concepts of music, the elements of notation, scales and tone systems. May not be included in music concentration.

102. Introduction to Form and Style. *Spring* (2) Mr. Stewart.

The underlying principles of musical structure. May not be included in music concentration.

***201-202. Theory I.** *Fall and Spring* (3,3) Mr. Stewart.

Review of theory fundamentals; elementary harmony; the uses of triads, seventh chords and non-chord tones are learned through exercises, diction, ear training and keyboard harmony.

301-302. Theory II. *Fall and Spring* (3,3) Mr. Stewart. *Prerequisite: Music 201-202.*

Advanced harmony, dealing with simple and extended alteration, secondary dominants, and advanced modulation. Second semester, application of harmonic techniques to elementary composition.

401-402. Form and Analysis. *Fall and Spring* (2,2) *Prerequisite: Music 301-302.*

The structural processes and forms of music, studied through analysis of examples of various periods and styles.

403, 404. Orchestration and Choral Arranging. *Fall and Spring* (2,2) Mr. Stewart and Mr. Truesdell. *Prerequisite: Music 301.*

Fall, orchestration; Spring, choral arranging.

405, 406. Counterpoint. *Fall and Spring* (2,2) Mr. Truesdell and Mr. Stewart. *Prerequisite: Music 301.*

Fall, counterpoint in the 16th century style of the motet, the madrigal and the Mass. Spring, counterpoint in the style of J. S. Bach. (Not offered in 1970-71.)

MUSIC HISTORY AND LITERATURE

211, 212. Introduction to Music. *Fall and Spring* (3,3) Mr. Paledes.

This course is designed to meet the needs of students interested in music, without regard to previous training and experience. It is not open to juniors or seniors concentrating in Music. The course traces the development of the art of music through the various historical periods, and familiarizes the student with the more important composers and their works. A synopsis of style, form, and theory is included.

***311, 312. History.** *Fall and Spring* (3,3) Mr. Truesdell. *Prerequisite: Music 201-202.*

Fall, Ancient Greeks to 1800; Spring, 1800 to present. Includes readings, reports, notated and recorded examples of all periods of western cultures. (Not offered 1971-72.)

313. Great Composers. *Fall* (2) Mr. Truesdell.

Major composers and works representative of various styles will be studied. The course is conducted on an intermediate level, and is not open to Music concentrators. (Not offered 1971-72.)

314. The Symphony. *Spring* (2) Mr. Truesdell.

A study of representative symphonic works of various periods; their style, form and orchestral setting. The course is conducted on an intermediate level, and is not open to Music concentrators. (Not offered 1971-72.)

315, 316. Opera. *Fall and Spring* (2,2) Mr. Truesdell.

Plots, music, and background of selected masterpieces from the standard operatic repertoire. Fall: Italian *bel canto* and French Grand Opera. Spring: German Romantic Opera, Wagner, Strauss, Nationalists, and Modern developments. Not open to Music concentrators.

†413, 414. Problems in Music. *Fall or Spring* (2-3,2-3) Mr. Truesdell and staff. For seniors only.

Directed independent study resulting in a thesis.

MUSIC EDUCATION

320. Music for Elementary School Teachers. *Fall and Spring* (3,3) Mr. Varner.

A course designed for prospective general teachers in the elementary grades. Not open to Music concentrators.

***321. Music in the Elementary School.** *Fall* (3) Mr. Varner.

Problems confronting the teacher of music in the elementary schools, and methods of instruction appropriate to the several grades. Primarily for Music concentrators.

***322. Music in the Secondary School.** *Spring* (3) Mr. Varner.

Materials and methods of instruction on the secondary school level.

***323, 324, 325. Instrumental Techniques, Materials, and Methods.** *Fall or Spring* (2,2,2) Mr. Varner.

Three courses are assigned, one each to woodwinds, brass, and strings; the development of performance skills and a study of the materials and methods of teaching. Percussion is correlated throughout.

***326. Choral Materials and Procedures.** *Fall* (3) Mr. Fehr. *Prerequisite: Music 201-202.*

A study of vocal and choral techniques and teaching methods.

***327, 328. Choral and Instrumental Conducting.** *Fall and Spring* (2,2) Mr. Fehr and Mr. Varner. *Prerequisite: Music 201-202.*

Study and practice in the techniques of the baton; problems of organizing musical groups.

†521. 522. Graduate Seminar in Music. *Fall or Spring* (2-3,2-3) Staff.

Directed independent study resulting in a thesis.

APPLIED MUSIC

The College offers individual and group instruction in Voice, and individual instruction in Piano, Organ, Strings, Woodwinds, and Brass.

A maximum of 10 credits may be earned through instruction courses, and a maximum of four credits may be earned through participation in musical organizations. Prerequisite or corequisite for credit in Applied Music is Music 101 or 201-202, etc. No credit in Applied Music is given until this requirement has been satisfactorily completed. Approval of the Head of the Department is required for all courses and ensembles in Applied Music except auditors in band, orchestra and choral organizations.

Students will be assigned to the course for which they are qualified on the basis of a placement test. Applied Music as an elective earns

one credit. Advanced students meeting exceptional standards and requirements may earn two credits.

Individual instruction in Applied Music is given on the basis of 30-minute private lessons once or twice weekly. Minimum preparation for each 30-minute lesson per week is one hour of daily practice.

Schedule of Fees Per Semester

One hour of group instruction per week.....	\$ 38.00
One 30-minute lesson per week.....	94.00
Two 30-minute individual lessons per week.....	135.00

ENSEMBLE

*131. Band	<i>Fall and Spring</i>	(1,1)	Mr. Varner
*132. Choir	<i>Fall and Spring</i>	(1,1)	Mr. Fehr
*133. Chorus	<i>Fall and Spring</i>	(1,1)	Mr. Fehr
*134. Orchestra	<i>Fall and Spring</i>	(1,1)	Mr. Stewart

CLASS INSTRUCTION

†Voice Class. Mr. Fehr.

141. I, II. Elementary Voice Class. *Fall and Spring* (1,1)
 241. I, II. Intermediate Voice Class. *Fall and Spring* (1,1)

INDIVIDUAL INSTRUCTION

†Voice 051-451. Mr. Roark.

051. Preparatory Voice. *Fall or Spring* (0)
 151. I, II. Elementary Voice. *Fall or Spring* (1,1)
 251. I, II, III, IV. Intermediate Voice. *Fall or Spring* (1,1,1,1)
 351. I, II, III, IV. Senior Voice. *Fall or Spring* (1,1,1,1)
 451. I, II, III, IV. Advanced Voice. *Fall or Spring* (1-2, 1-2, 1-2, 1-2)

†Piano 052-452. Mrs. Lendvay, Mr. Paledes and Mr. Truesdell.

052. Preparatory Piano. *Fall or Spring* (0)
 152. I, II. Elementary Piano. *Fall or Spring* (1,1)
 252. I, II, III, IV. Intermediate Piano. *Fall or Spring* (1,1,1,1)
 352. I, II. Senior Piano. *Fall or Spring* (1,1)
 452. I, II, III, IV. Advanced Piano. *Fall or Spring* (1-2,1-2,1-2,1-2)

†Organ 053-453. Mr. Darling and Mrs. Koller.

- 053. Preparatory Organ. *Fall or Spring* (0)
- 153. I, II. Elementary Organ. *Fall or Spring* (1,1)
- 253. I, II, III, IV. Intermediate Organ. *Fall or Spring* (1,1,1,1)
- 353. I, II. Senior Organ. *Fall or Spring* (1,1)
- 453. I, II, III, IV. Advanced Organ. *Fall or Spring* (1-2,1-2,1-2,1-2)

†Strings 054-454. Mr. Stewart.

- 054. Preparatory Strings. *Fall or Spring* (0)
- 154. I, II. Elementary Strings. *Fall or Spring* (1,1)
- 254. I, II, III, IV. Intermediate Strings. *Fall or Spring* (1,1,1,1)
- 354. I, II. Senior Strings. *Fall or Spring* (1,1)
- 454. I, II, III, IV. Advanced Strings. *Fall or Spring* (1-2,1-2,1-2,1-2)

†Woodwinds 055-455. Mr. Varner.

- 055. Preparatory Woodwinds. *Fall or Spring* (0)
- 155. I, II. Elementary Woodwinds. *Fall or Spring* (1,1)
- 255. I, II, III, IV. Intermediate Woodwinds. *Fall or Spring* (1,1,1,1)
- 355. I, II. Senior Woodwinds. *Fall or Spring* (1,1)
- 455. I, II, III, IV. Advanced Woodwinds. *Fall or Spring* (1-2,1-2,1-2,1-2)

†Brass 056-456. Staff.

- 056. Preparatory Brass. *Fall or Spring* (0)
- 156. I, II. Elementary Brass. *Fall or Spring* (1,1)
- 256. I, II, III, IV. Intermediate Brass. *Fall or Spring* (1,1,1,1)
- 356. I, II. Senior Brass. *Fall or Spring* (1,1)
- 456. I, II, III, IV. Advanced Brass. *Fall or Spring* (1-2,1-2,1-2,1-2)

Philosophy

PROFESSOR MACDONALD (*Chairman of the Department*). ASSOCIATE PROFESSORS COBB,¹ FOSTER,² HEARN, JONES, McLANE, AND REED. ASSISTANT PROFESSORS FUCHS AND SMITH.³ INSTRUCTOR HERRICK.⁴

REQUIREMENTS FOR CONCENTRATION

A student whose aim is to use a concentration in Philosophy as a basis for a liberal education may take the minimum concentration requirement of thirty hours in the Department. Those who wish to prepare for graduate study in philosophy or a related discipline will normally take more than this required minimum. No specific set of courses is prescribed for all concentrators. However, every concentrator should have some acquaintance with the history of philosophy, various types of philosophy, alternative philosophical methodologies, and with advanced analysis of particular philosophers and contemporary philosophical issues. A program for each concentrator will be developed through consultation with members of the philosophy faculty.

AREA REQUIREMENTS

Students satisfying area requirements in Philosophy normally take either 101-102 or 201-202. Upon the approval of the department, other courses may be substituted when appropriate to the background and interests of particular students. Logic may not be taken to satisfy area requirements.

Those students electing Philosophy to satisfy the area requirement of two additional courses beyond the introductory level will select appropriate advanced courses approved by the department.

FRESHMAN SEMINARS

The Department of Philosophy offers Freshman Seminars on a variety of topics.

DESCRIPTION OF COURSES

101-102. Introduction to Philosophy. *Fall and Spring (3,3) Staff. One may not receive credit for both Philosophy 101-102 and 201-202.*

¹ On leave of absence, fall semester, 1970-71.

² On leave of absence, 1970-71.

³ Acting Assistant Professor, 1970-71.

⁴ Acting Instructor, fall semester, 1970-71.

An introduction to the problems, methods and scope of philosophical enquiry. Topics to be studied are selected on the basis of the relevance to other aspects of liberal education as well as for their intrinsic philosophical interest. Examples of such topics are free will and scientific determinism, moral relativism and skepticism, the question of God's existence, the nature and aims of education, and problems of man and society such as civil disobedience and violence.

150. Freshman Seminar. *Fall and Spring* (3) Staff.

195-196. Analysis of Concepts. *Fall and Spring* (3,3) Mr. Hearn and Miss Smith. *Prerequisites: Freshman standing and consent of the instructor.* (Will not be offered 1971-72.)

An introduction to techniques of philosophical analysis through practice in their application to some of the concepts fundamental to Western thought such as: freedom, individuality, nature, symbol, knowledge, law, infinity, education, and value.

201-202. The History of Philosophy. *Fall and Spring* (3,3) Mr. MacDonald and Staff. *One may not receive credit for both Philosophy 101-102 and 201-202.*

An historical introduction to philosophy based on readings from the works of various philosophers such as Plato, Aristotle, Lucretius, and Aquinas during the first semester; Descartes, Hume, Kant, Mill and Russell during the second semester.

301. Introduction to Logic. *Fall and Spring* (3) Mr. Herrick, Mr. McLane, and Mrs. Reed.

An introduction to principles of valid reasoning with special emphasis on modern symbolic techniques and their uses.

303. Ethics. *Fall and Spring* (3) Mr. Fuchs and Mr. Jones.

A philosophical examination of problems and theories about such topics as good and evil, right and wrong, pleasure, choice, duty, happiness, and the good life.

304. Aesthetics. *Spring* (3) Mr. Foster.

A philosophical analysis of the nature of aesthetic experience and its objects. Special attention will be given to apprehension and judgment, concepts and criteria, and meaning and truth in the arts. (Not offered 1970-71.)

305. Social and Political Ideologies. *Spring* (3) Mr. Jones.

An examination of some of the leading social and political theories of the past one hundred years. Analysis of selected writings of such philosophers as Hegel, Marx, Nietzsche, Lenin, and Spencer.

306. Philosophical Problems. *Fall* (3) Miss Smith. *Prerequisites: Philosophy 201, 202.*

A study of such major philosophical problems as those concerning knowledge and reality, morality and conduct, and art and beauty. Special attention will be devoted to philosophical method.

311. Philosophy of Religion. *Spring* (3) Mr. Cobb.

A philosophical investigation of the nature of religious experience, activity, and belief. The course will also include an examination of such concepts as those of God, freedom, and immortality.

313. Introduction to the Philosophy of Science. *Fall* (3) Mr. McLane.

A philosophical examination of the nature, validity, and significance of scientific inquiry. Special attention will be given to the descriptive, explanatory, and predictive aspects of scientific theories. (Not offered 1970-71.)

321. Existentialism and Phenomenology. *Fall* (3) Mr. McLane.

An examination of important aspects of existentialism and phenomenology with readings in such philosophers as Kierkegaard, Nietzsche, Husserl, Jaspers, Heidegger, Sartre, and Merleau-Ponty. Some attention will also be given to the impact of these philosophical movements upon contemporary literature, religious thought, and psychology.

322. American Philosophy. *Fall* (3) Mrs. Reed. *Prerequisites: Philosophy 201, 202 or consent of the instructor.*

A study of readings selected from the works of such philosophers as Edwards, Jefferson, Peirce, Royce, James, Dewey, Santayana, and Whitehead.

323. Eastern Philosophy. *Spring* (3) Mr. Foster. *Prerequisites: Philosophy 201, 202 or consent of the instructor.*

An introduction to the major systems of thought of India, China, and Japan through examination of some of the fundamental philosophical concepts of Hinduism, Jainism, Buddhism, Confucianism, and Taoism. (Not offered 1970-71.)

331. Greek Philosophy. *Fall* (3) Mr. Fuchs. *Prerequisites: Philosophy 201, 202 or consent of the instructor.*

A critical examination of representative Greek philosophers with special emphasis on Plato and Aristotle.

332. Medieval Philosophy. *Spring* (3) Mr. Foster. *Prerequisites: Philosophy 201, 202 or consent of the instructor.*

Analysis of selected writings of major medieval philosophers such as Augustine, Erigena, Anselm, Maimonides, Bonaventure, Aquinas, Scotus, and Occam. (Not offered 1970-71.)

333. Continental Rationalism. *Fall* (3) Mr. Foster. *Prerequisites: Philosophy 201, 202 or consent of the instructor.*

A critical examination of representative rationalist systems with special emphasis on Descartes, Spinoza, and Leibniz. (Not offered 1970-71.)

334. British Empiricism. *Spring* (3) Mr. MacDonald. *Prerequisites: Philosophy 201, 202 or consent of the instructor.*

A critical examination of representative theories of empiricism with special emphasis on Locke, Berkeley, and Hume.

335. Early Twentieth Century Philosophy. *Fall* (3) Mrs. Reed. *Prerequisites: Philosophy 201, 202 or consent of the instructor.*

An examination of the developments of philosophical thought from approximately 1900 to 1930 (e.g. idealism, realism, pragmatism, voluntarism, logical atomism) with selected readings from the works of representative philosophers of the period. (Not offered 1970-71.)

336. Contemporary Philosophy. *Spring* (3) Miss Smith. *Prerequisites: Philosophy 201, 202 or consent of the instructor.*

An examination of major philosophical writing since 1930.

***401. Theory of Knowledge.** *Fall* (3) Mrs. Reed.

An examination of philosophical theories about such topics as the nature and criteria of truth, perception and cognition, meaning, knowledge, and the validation of belief.

***402. Metaphysics.** *Spring* (3) Mrs. Reed.

The study of such concepts as those of substance and essence, time and eternity, matter and consciousness, truth, cause, and being. Critical

examination of theories about such topics as mechanism and teleology, man and his place in nature, and the relation of the mind to the body.

***403. Advanced Ethics.** *Spring* (3) Mr. Fuchs.

A study of selected normative and critical problems in moral philosophy.

404. Advanced Logic. *Spring* (3) Mr. McLane. *Prerequisite: Philosophy 301 or consent of the instructor.*

Systematic investigation of topics in logic drawn from such areas as system construction, proof theory, modal and deontic logic, and abstract set theory.

***413. Philosophy of Mind.** *Fall* (3) Mr. Jones.

Critical analysis of theories concerning the nature of consciousness, the concept of person and personal identity, and some theories of the relation of the mind to the body. Attention will be devoted to the philosophical relevance of such sciences as psychology, physiology, and cybernetics.

***414. Philosophy of Social Science.** *Spring* (3) Mr. Jones.

An examination of theories and methods in the social sciences. A comparison with the natural sciences through consideration of such philosophical topics as the nature of explanation, concept formation, confirmation of theories, and the relation of facts to values. (Not offered 1970-71.)

416. Philosophical Problems in Physical Science. *Spring* (3) Mr. McKnight.¹ *Prerequisite: Either Philosophy 301 and Physics 101, 102 or consent of the instructor.*

A study of philosophical problems arising in classical physics and relativity and quantum theory. Special attention will be given to such topics as the status of observables, measurement, time, and elementary particles. The philosophical implications of contemporary physics will be discussed. (Same as Physics 416.)

***421. The Philosophy of Kant.** *Fall* (3) Mr. MacDonald.

Intensive study of *The Critique of Pure Reason* and selections from other writings of Kant.

¹ Professor of Physics.

***422. Great Philosophers.** *Fall or Spring* (3) Mr. Cobb and Mr. Hearn.

A systematic study of the thought of a great philosopher such as Plato, Aristotle, Spinoza, Hume, or Wittgenstein. The particular philosopher to be studied is designated each time the course is offered. (Not offered, 1969-70.)

†431, 432. Senior Seminar in Philosophy. *Fall and Spring* (3,3) Staff.

A meeting of the Faculty of the Department with advanced students for the purpose of philosophical investigation. An important modern philosophical work is examined each semester and students are required to write and present papers for critical discussion. (Not offered 1970-71.)

441, 442. Advanced Reading in Philosophy. *Fall and Spring* (3,3) Staff. *Prerequisites:* Eight courses in philosophy and consent of the Department.

Individually supervised readings on special topics for advanced students.

HONORS STUDY

†495, 496. Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Honors Study in Philosophy will be enrolled in this course during both semesters of their senior year. The course comprises (a) supervised reading in the field of the student's major interest; (b) supervised reading of works selected from a general bibliography of philosophy; (c) satisfactory completion of a comprehensive examination covering Logic, History of Philosophy, Ethics or Aesthetics, and Metaphysics or Theory of Knowledge; (d) the preparation and presentation by May 1 of an Honors Essay.

Physical Education for Men

PROFESSOR H. SMITH (*Chairman of the Department*), ASSOCIATE PROFESSORS AGE, JENSEN AND LINKENAUER. ASSISTANT PROFESSORS DERINGER AND JONES. INSTRUCTORS BESNIER, CARPENTER, GODLEY, HAYNIE, KEADLE, RANDOLPH, AND UNDERWOOD. COLLEGE PHYSICIANS DEBORD AND BROWN.

REQUIREMENTS FOR CONCENTRATION

The minimum number of semester credits required for concentration in Physical Education is 34 and must include Physical Education 203, 308, 310, 313, 408, 411, 413, 494, Biology 307 and 308 and any two of the following 316, 317, 412. All courses except Physical Education 203 and 208 of the concentration program should be taken during the student's junior and senior years.

Students may elect to take either the B.S. degree or the A.B. degree.

Those students desiring to meet the professional requirements for certification in the State of Virginia should plan their programs with the head of the Department of Physical Education. Students enrolling in professional courses to meet certification requirements in other states should first consult a member of the faculty of the School of Education.

PROGRAM FOR ADVANCED STUDY

Students who are qualified for advanced study and who have satisfied admission requirements may register for the Master of Arts Degree with concentration in Physical Education or for the degree of Master of Education with emphasis in Education and Physical Education as a related field. (See pages 106, 280.) A minimum residence period of one regular session or of four summer sessions of nine weeks is required.

In addition to the general requirements for admission established by the College, students desiring to enter upon graduate study in Physical Education should present satisfactory undergraduate work in Physical Education or related fields, from a recognized institution.

A minimum of 15 credits of the total 24 submitted for the Master of Arts degree must be in the department of concentration. Other courses should be selected from related departments such as Education, Sociology and Biology, or selected from additional courses in Physical Education. For special requirements of the M.Ed. degree, see page 280 and write to the Dean of the School of Education.

SPECIAL CONCENTRATION PROGRAM LEADING TO STATE CERTIFICATION

FRESHMAN YEAR			
<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Biology 101, or Chemistry 102, or Physics 101, 103	4	Biology 102, or Chemistry 102, or Physics 102, 104	4
English 101	3	English 102	3
Language	3 or 4 ¹	Language	3 or 4 ¹
Mathematics 101	3	Mathematics 102	3
Physical Education	1	Physical Education 102	1
Elective	3	Elective	3
Total Semester Credits15 to 18		Total Semester Credits15 to 18	

SOPHOMORE YEAR			
English 201	3	English 202	3
Economics 201	Two of Four 6	Economics 202	Two of Four 6
Government 201 ..		Government 202 ...	
History 102		History 102	
Sociology 201		Sociology 202	
Language	3 or 4 ¹	Language	3 or 4 ¹
Physical Education 203	3	Physical Education 208	3
Physical Education 201	1	Physical Education 202	1
Elective	2	Elective	2
Total Semester Credits15 to 18		Total Semester Credits16 to 18	

JUNIOR YEAR			
Biology 307	3	Biology 308	3
Education 301	3	Education S302	3
Physical Education 309 ²	3	Physical Education 308	3
Physical Education 310	3	Physical Education 321	3
Physical Education 313	2	Physical Education 316	2
Elective	2-3	Elective	2-4
Total Semester Credits16 to 19		Total Semester Credits16 to 18	

SENIOR YEAR			
History 201	3	Education 411 or 404	3
Physical Education 494	3	Physical Education 408	3
Physical Education 411	3	Physical Education 412	2
Physical Education 413	2	Physical Education 414	2
Physical Education 415	3	Physical Education 416	3
Elective	3-4	Elective	3-4
Total Semester Credits17 to 18		Total Semester Credits16 to 17	

NOTE: Electives may very well be used to help make up a teaching minor. Possible minors are in language, mathematics, science, and social studies.

¹ See page 97.

² For Virginia State Certification only; cannot be counted toward meeting AB or BS degree requirements.

The above comprehensive program qualifies a person for a number of positions: teaching Physical Education in a consolidated school or a large secondary school; teaching Physical Education and a second subject in a small secondary school; coaching and directing athletics combined with the teaching of another subject or subjects; supervising physical education and recreation programs; summer camp work; and preparation for graduate study in Physical Education, Physical Therapy or Corrective Therapy.

DESCRIPTION OF COURSES

Students concentrating in other departments may elect physical education courses according to interest or to prepare for teaching combinations, recreation work, or other related fields.

101, 102, 201, 202. Required Physical Education. *Fall and Spring* (1,1) Staff.

There shall be no physical education requirement for students who demonstrate skills in four activities, one of which must be swimming. Other students are to complete as many as four semesters in a program of physical activity, depending on the number of skills on which they have earned exemptions. These requirements may be satisfied by electing an activity course offered by the Men's Department of Physical Education, by participating for a season in a varsity sport, or by passing one of the skills tests offered. Before completing four semesters, students are to demonstrate survival swimming skills unless medically excused.

Students with physical disabilities will be assigned to a special adapted sports class on the recommendation of the College physician. Instruction is given in the following individual and group activities: advanced swimming and life saving, beginning swimming, badminton, basketball, fencing, golf, gymnastics, handball, lacrosse, soccer, scuba diving, tennis, track and field, volleyball, and wrestling.

203. Physical Education and Recreation for the Classroom Teacher. *Fall* (3) Mr. Agee.

Special emphasis given the role of motivation, skill transfer and retention as applied to physical education. Course primarily designed to emphasize fundamentals of basic skills, physical fitness testing, and individual and team activities on the elementary school level.

208. First Aid and Safety. *Spring* (3) Mr. Jensen.

Instruction focuses on the Standard and Advanced Red Cross First Aid. Safety projects, problems, and the organization of materials, methods and techniques are developed. *Lectures and laboratories four hours.*

308. Applied Anatomy and Kinesiology. *Fall* (3) Mr. Linkenauger. *Prerequisite: Biol. 308.*

A study of the principles of human motion. Anatomical and mechanical analysis of individual skills in physical education activities is stressed.

309. Driver Education.¹ *Fall or Spring* (3) Mr. Jones.

Critical analysis of traffic accidents attitude factors, and essential knowledges are developed. The laboratory phase will include the use of psychophysical and psychological tests and actual practice-teaching behind the wheel. *Lectures and laboratories four hours.*

310. History and Principles of Physical Education. *Fall* (3) Mr. Jensen.

This course is an orientation in the history and principles of physical education, health, and recreation. *Lectures and laboratories four hours.*

313. Advanced Gymnastics and Wrestling. *Spring* (2) Mr. Haynie and Mr. Besnier.

A detailed study and development of demonstrable skills with considerable emphasis on exhibition planning and coaching techniques in the course design. *Lectures and laboratories four hours.*

316. Advanced Baseball, Track and Field. *Spring* (2) Mr. Jones and Mr. Randolph.

This course is structured so as to give special attention to the approved scientific techniques of coaching and the students' acquisition of advanced demonstrable skills. *Lectures and laboratories four hours.*

317. Theory and Practice of Coaching Soccer and Lacrosse. *Fall* (2) Mr. Carpenter.

A detailed study of the advanced basic skill techniques and coaching methods utilized in Soccer and Lacrosse.

¹ While this course may be taken to fulfill the requirement for Virginia State certification in Driver Education, it may not be counted toward meeting requirements for the A.B. or B.S. degree.

318. Sports Officiating. *Fall and Spring* (2) Mr. Jones.

A survey and critical analysis of the rules and officiating techniques of team and individual events. A minimum of twelve contact hours of supervised intramural officiating is required. *Lectures and laboratories four hours.*

321. Foundations of Health Education. *Fall and Spring* (3) Mr. Smith.

An advanced course which develops instructional competencies with special emphasis on the historical as well as the most recent health facts, principles and concepts. A survey is made of the many Virginia State Dept. publications and other resource materials.

400. Senior Seminar. *As required* (3) Staff.

Discussion by the faculty and advanced students of contemporary problems in physical education. Students will write and present papers for critical discussion. Guest lecturers will occasionally present seminars.

408. Organization and Administration of Health and Physical Education Programs. *Spring* (3) Mr. Smith.

This course provides counsel on organizational and administrative policies and procedures for physical education, health, and intramural programs in the public schools.

409. Organization and Administration of Community Recreation Programs. *Fall* (2) Mr. Carpenter.

This course is concerned with the administrative and legal aspects of local, state and federal recreation programs.

411. Therapeutic Physical Education. *Fall* (3) Mr. Smith and Mr. Linkenauer. *Prerequisite: Biology 308.*

Basic concepts examined in this course include physical examination procedures with an emphasis on normal and faulty postural conditions. Special attention is given to remedial and adaptive exercises and activities. Physical and corrective therapy techniques and procedures are studied.

412. Advanced Football and Basketball. *Full or Spring* (2) Mr. Holtz and Mr. Agee.

A detailed study and development of advanced demonstrable skills

with special emphasis on coaching techniques is the purpose of this course. *Lecture and laboratories four hours.*

413. Advanced Tennis and Golf. *Fall or Spring* (2) Mr. Agee.

This is a course to further develop the students' competencies and demonstrable skills with emphasis on coaching procedures and tournament management. *Lecture and laboratories four hours.*

414. Advanced Swimming and Rhythmics. *As Required* (2) Mr. Haynie.

This course is an intensive study of the coaching methods and teaching techniques plus the acquisition of advanced demonstrable skills in both areas of activity. *Lectures and laboratories four hours.*

415, 416. Student Teaching. *Fall and Spring* (3) Mr. Smith. *Prerequisites: Senior Standing, twenty-four credits in Education and Physical Education.*

This course involves daily observation and teaching in a public school system with weekly conferences, special assignments and reports. *Lectures and laboratory five hours.*

492. Physiology Activity. *Spring* (3) Mr. Linkenauer. *Prerequisite: Biol. 307, 308.*

An in depth study is made of the physiological aspects of exercise, fatigue, coordination, training and growth; functional tests with normal and abnormal subjects; investigations and independent readings.

493. Philosophy and Literature in Health, Physical Education and Recreation. *As Required* (3) Mr. Jones.

Extensive readings, discussions and evaluations of historical and current philosophies and practices are made. Educational implications of problems facing the separate fields are analyzed.

494. Test and Measurements in Health, Physical Education and Recreation. *Fall* (3) Mr. Jones.

Evaluation techniques are studied with emphasis placed on tests of physical fitness, sports ability, body mechanics, growth, and written health tests. Statistical informance theories are analyzed.

502. Problems and Research in Health, Physical Education and Recreation. *As required* (3) Mr. Smith. *Prerequisite: Physical Education 494 or the equivalent.*

This course includes the application of various methods and statistics as most commonly used in physical education research. Limited research studies and problems are conducted in the three areas.

503. Seminar in Advanced Techniques in Sports. *As Required* (3) Staff.

Seminar is devoted to the designing of offensive and defensive plays, types of strategy, instruction of players, and crowd control problems.

506. Administration and Supervision in Physical Education, Health and Recreation. *As Required* (3) Mr. Smith.

Study is given to administrative management and supervision in all three areas, modification of programs to fit the facilities available, curriculum planning, grading procedures and techniques of instruction.

508. Health Coordination. *As Required* (3) Staff.

A comprehensive study is made of the factors of school and community activities related to health. Relationships of the service, instructional, protective, and guidance phases in the health program are identified.

Physical Education for Women

ASSOCIATE PROFESSORS WEST (*Chairman of the Department*), ROBY AND WALLACE. ASSISTANT PROFESSORS ARCHER, CROWE, JACKSON, LAMBERT, HAUSSEMMANN,¹ AND TOMLINSON. COLLEGE PHYSICIANS DEBORD AND BROWN.

The physical education requirement will be waived for students who demonstrate advanced skills in four activities, one of which must be swimming. Opportunities to demonstrate advanced ability are offered in the fall and spring of each academic year. Other students are to complete as many as four semesters in a program of physical activity, depending on the number of skills on which they have earned exemptions. These requirements may be satisfied by electing an activity course offered by the Department of Physical Education, by participating for a season in a varsity sport, or by passing one of the skills tests offered. Before completing four semesters, students are to demonstrate survival swimming skills unless medically excused.

DESCRIPTION OF COURSES

101. Team Sports. *Fall and Spring* (1) Miss Archer, Miss Crowe, Mrs. Jackson, Miss Haussermann.

Seasonal activities: hockey, basketball, volleyball, and lacrosse. *Two double periods weekly.*

102. Dance. *Fall and Spring* (1) Miss Roby, and Miss Wallace.

Fundamentals of modern dance. *Two double periods.*

+145, 146. Adapted Activities. *Fall and Spring* (1) Mrs. West.

Upon recommendation of the head of the Department and the College physicians, these courses may be substituted for regular classes.

+195, 196. Selected Sports and Dance Activities. *Fall and Spring* (1) Mrs. West.

Upon recommendation of the head of the Department, these courses (designed for proficient students) may be substituted for regular classes.

201. Swimming. *Fall and Spring* (1) Miss Crowe, Mrs. Jackson, Miss Lambert, Miss Tomlinson, and Mrs. West.

¹ On leave of absence, 1970-71.

Safety skills, standard swimming strokes, diving, and life saving techniques are offered. *Two double periods.*

202. Individual Sports. *Fall and Spring* (1) Miss Archer, Miss Crowe, Mrs. Jackson, Miss Lambert, Miss Haussermann, Miss Tomlinson, and Mrs. West.

Seasonal activities: archery, badminton, body mechanics, bowling,¹ canoeing, fencing, golf, gymnastics, riding,¹ techniques of self defense,¹ and tennis. *Two double periods.*

ELECTIVE COURSES IN PHYSICAL EDUCATION FOR WOMEN

The following courses are intended to supplement the four semesters of required physical education and may be elected for academic credit. These courses are open to juniors and seniors, and may be elected concurrently with a required class by sophomores. Freshmen may elect these courses in addition to required work with permission of the head of the Department.

302. Waterfront Leadership. *Spring* (2) Mrs. West and Miss Lambert. *Prerequisite: Senior Life Saving.*

Especially designed for students who wish to do camp and playground work and includes Instructor's courses of the American Red Cross. *Four class and laboratory hours.*

303, 304. Coaching and Officiating of Selected Sports. *Fall and Spring* (2) Staff. *Prerequisite: Proficiency in two of the following sports: hockey, basketball, tennis, swimming, lacrosse, and volleyball.*

Theory and practice in the coaching and officiating of two seasonal sports each semester. Women's National Officials Rating Tests will be given. *Four class and laboratory hours.*

ELECTIVE COURSES IN DANCE

These courses supplement the required courses in Physical Education and may be elected for academic credit by men and women with the consent of the instructor.

DESCRIPTION OF COURSES

TECHNIQUE. These courses are designed to develop an understanding

¹ Fees are charged for these courses.

of movement as an art form and means of expression, beginning with movement fundamentals and continuing through longer and more complex phases with emphasis on performance. Students will be assigned to the course for which they are qualified on the basis of previous background and demonstrated ability. A maximum of 12 credit hours may be earned in Technique.

111, 112. Elementary Modern Dance Technique. *Fall and Spring* (2,2) Staff.

Four studio hours.

211, 212. Intermediate Modern Dance Technique. *Fall and Spring* (2,2) Staff.

Four studio hours.

311, 312. Advanced Modern Dance Technique. *Fall and Spring* (2,2) Staff.

Four studio hours.

220. Introduction to Contemporary Dance. *Fall* (2) Miss Wallace.

An introduction to the field of Modern Dance with emphasis on the stylistic approach and aesthetic of the artists who have contributed to its development in the twentieth century. *Two class hours.*

305, 306. Dance composition. *Fall and Spring* (2,2) Miss Roby.
Prerequisite: Physical Education 102.

First Semester: An introduction to the elements, materials and structure of a dance composition. *Four class and laboratory hours.*

Second Semester: Composition of dance etudes; form and style related to other modern arts. *Four class and laboratory hours.*

406. Problems in Dance. *Spring* (3) Miss Roby and Miss Wallace.

Directed study in a special area for the advanced student arranged on an individual basis. The course would include a substantial choreographic project or a research project for a student with special interest and ability in a related field, such as music, theatre, or fine arts.

WOMEN'S SPORTS

Recreational activities are conducted under the auspices of the Women's Recreation Association, with executive power assigned to a committee of faculty and students. (See page 70.)

Physics

PROFESSORS WINTER (*Chairman of the Department*), CROWNFIELD, FUNSTEN, MCKNIGHT, SIEGEL, AND WELSH. ADJUNCT PROFESSOR LAWRENCE. ASSOCIATE PROFESSORS CRAWFORD, ECKHAUSE, GROSS, KOSSLER, LONG, PERDRISAT, REMLER, SCHONE, SHER, AND VON BAEYER. VISITING ASSOCIATE PROFESSOR OLSEN. ASSISTANT PROFESSORS ANDERSEN, BLOOMBERG, CHAMPION, DOVERSPIKE, GARY, KANE, SOEST, WEISZ, AND YAM. RESEARCH ASSOCIATES ALDER, HEIMAN, LUNKE, AND MILLER. RESEARCH ENGINEER HUMMEL.

REQUIREMENTS FOR CONCENTRATION

A minimum of 38 credits, including not more than eight of 100-level courses, is required for concentration in physics. Either Physics 451-452 or Physics 495-496 must be completed.

Since a physics concentration is used as preparation for a variety of activities, the only requirements are those listed above. The following statements are advice appropriate to the typical student: Physics 101-102 and calculus should be taken during the freshman year. In addition to the required 451-452 or 495-496, the normal program for concentration includes Physics 101-102, 201-202, 251-252, 301, 311, 312, 401, and selections from 302, 351-352, 402, 411-412, 475, 481, and 482.

Introductory courses and courses on special topics are offered as Freshman Seminars.

DESCRIPTION OF COURSES

101-102. General Physics. *Fall and Spring* (4,4) Mr. Sher, Mr. Doverspike, and Staff.

Mechanics, heat, sound, electricity and magnetism, light, and modern physics. Designed for students who are considering concentrating in one of the sciences or mathematics. Concurrent registration in calculus is recommended. Some sections are available as Freshman Seminars. Honors sections are open to students that have a good preparation for and a strong interest in physics. *Lectures, problem sessions, and laboratory six and one-half hours.*

103-104. Elementary Physics. *Fall and Spring* (4,4) Mr. von Baeyer and Staff.

A beginning course of College Physics satisfying the area requirements in the field of science. Designed for the non-science concentrator. Mechanics, heat and sound first semester; electricity, light and atomic physics second semester. Attention is given to the historical development and philosophical significance of physical concepts and theories. *Lectures, problem sessions, and laboratory six and one-half hours.*

150. Freshman Seminar.

176. Descriptive Astronomy. *Spring* (3) Mr. Smith.

Descriptive study of the solar system; theories of the origin of the solar system. Star classification; descriptive studies of star clusters and galaxies. An elective course not counting toward a concentration in Physics.

201-202. Intermediate Physics. *Fall and Spring* (3,3) Mr. Schone and Mr. Winter. *Prerequisite: two semesters each in physics and calculus. Corequisite: Physics 251-252.*

Waves and optics first semester. Relativity and the development of quantum ideas second semester.

203. Modern Physics. *Fall* (4) Mr. Crawford. *Prerequisite: two semesters of physics and one semester of calculus.*

Review of classical physics; relativity, introduction to quantum physics, recent developments in physics. This course is designed for prospective secondary school teachers and may not count for concentration in physics. *Lectures and laboratory six hours.*

204. Optics and Other Wave Phenomena. *Fall* (4) Mr. Crawford. *Prerequisite: two semesters of physics and one semester of calculus.*

Applications of Snell's law; optical instruments, photography, interference phenomena, lasers. This course is designed for prospective secondary school teachers and may not count for concentration in physics. *Lectures and laboratory six hours.*

251-252. Intermediate Experimental Physics. *Fall and Spring* (1,1) Mr. Kane and Staff. *Corequisite: Physics 201-202.*

Experiments in atomic, nuclear and solid state physics, geometrical and physical optics, interference and diffraction phenomena and atomic spectra. *Laboratory three hours.*

301-302. Classical Mechanics. *Fall and Spring* (3,3) Mr. Bloomberg. *Prerequisite: Physics 201-202.*

Plane mechanics, mechanics in three dimensions, Lagrangian and Hamiltonian mechanics, special relativity and the mechanics of continuous media.

311. Introductory Quantum Physics. *Fall* (3) Mr. Kossler. *Prerequisite: Physics 201-202.*

Atomic, nuclear and solid state physics.

312. Thermodynamics and Introduction to Statistical Mechanics. *Spring* (3) Mr. Doverspike. *Prerequisite: Physics 201-202.*

The principles of thermodynamics, kinetic theory of gases, and elementary statistical mechanics.

351-352. Experimental Physics. *Fall and Spring* (1,1) Mr. Funsten and Staff.

Introduction to the techniques of experimental research. Circuit theory, electronics, thermometry, vacuum techniques and photon and particle detection. Design and construction of experiments. Evaluation and analysis of experimental results. *Laboratory three hours.*

401-402. Electricity and Magnetism. *Fall and Spring* (3,3) Mr. Eckhause. *Prerequisite: Physics 301-302.*

Development of the theory of electricity and magnetism from fundamental principles. Maxwell's equation, electromagnetic waves and radiation.

411-412. Quantum Physics. *Fall and Spring* (3,3) Mr. Welsh. *Prerequisite: Physics 301, 302 and 312.*

The quantum theory in its application to atomic, solid state and nuclear physics.

416. Philosophical Problems in Physical Science. *Spring* (3) Mr. McKnight. *Prerequisites: Either Phil. 301, 305 or Phys. 101, 102, or consent of instructor.*

A study of philosophical problems arising in experiment and theory in classical physics, quantum theory and relativity as the status of observables, measurements, time and elementary particles. Philosophical implications of contemporary physics. (Same as Philosophy 416.)

451-452. Physics Research. *Fall and Spring* (1-3,1-3) Mr. Schone and Staff.

Independent study consisting of both bibliographic and experimental research.

475. Introduction to Mathematical Physics. *Fall* (3) Mr. McKnight.

Vector analysis, complex variables, matrices, series solutions of differential equations, orthogonal functions and partial differential equations. This course does not carry undergraduate credit in Physics.

481, 482. Topics in Physics. *Fall and Spring* (to be arranged) Staff.

495-496. Honors. *Fall and Spring* (3,3) Staff.

Students admitted to Honors Study in Physics will be enrolled in this course during both semesters of their senior year. Each candidate will be responsible for (a) reading and discussion of a selected list of books in some specific area of the literature of physics; (b) the preparation and presentation by May 1 of an Honors Essay based on his own research or his part of a major research project; (c) satisfactory completion of a comprehensive examination in the field of the student's major interest.

MASTER OF ARTS AND MASTER OF SCIENCE DEGREE IN PHYSICS

The candidate for the degree of Master of Arts and Master of Science in Physics must meet the following requirements in addition to the general requirements stated on pages 106-107 of this catalog.

The candidate must complete a program of courses recommended by the Department. This program depends on the candidate's preparation and special interests, but will frequently include Physics 501, 505, 509, 510, 516 and 521.

The candidate must be able to read scientific literature in French or German or Russian.

The candidate must pass a qualifying examination dealing with undergraduate material, the content of first year courses, and information that a first-year student should have obtained from seminars, colloquia, and journals.

The candidate is required to register for Physics 580, Colloquium, during a minimum of one semester of residence.

The thesis topic must be chosen and work begun in consultation with the Physics Department staff. Work completed while working elsewhere may be used as a thesis provided the above requirement is met.

Candidates enrolled in a program leading to the Master of Science degree are required to substitute eight semester hours of prescribed courses for the thesis.

DOCTOR OF PHILOSOPHY DEGREE IN PHYSICS

The candidate for the degree of Doctor of Philosophy in physics must meet the following requirements in addition to the general requirements stated on pages 108-109 of this catalog.

The candidate must complete a program of courses recommended by the Department. This program depends on the candidate's preparation and special interests, but will frequently include, in addition to the master's level courses, Physics 506, 511, 512, 522 and a variety of specialty courses appropriate to his research areas.

The candidate must be able to read scientific literature in French or German or Russian.

The candidate must pass examinations that test his familiarity with the principal fields of physics. Details of procedure will vary; it is generally required that the candidate have high standing in the qualifying examination and that in addition he demonstrates competence in several advanced topics.

Dissertation research must be done under the supervision of the faculty of the Department. The dissertation must be an original and substantial contribution to knowledge in the field of physics. The candidate must successfully defend his dissertation in a public oral examination.

GRADUATE COURSES

501. Classical Mechanics. *Fall* (3) Mr. McKnight.

505-506. Classical Electricity and Magnetism. *Fall and Spring* (3,3) Mr. Perdrisat.

509-510. Quantum Mechanics. *Fall and Spring* (3,3) Mr. Gross.

511-512. Advanced Quantum Mechanics. *Fall and Spring* (3,3) Mr. Yam. *Prerequisite: Physics 510.*

516. Statistical Physics and Thermodynamics. *Spring* (3) Mr. Sher. *Prerequisite: Physics 501 and 509.*

517. Advanced Statistical Physics. *Fall* (3) Mr. Crownfield. *Prerequisite: Physics 516.*

521. Mathematical Physics. *Fall* (3) Mr. Andersen.

522. Advanced Mathematical Physics. *Spring* (3) Mr. Andersen.

531-532. Solid State Physics. *Fall and Spring* (3,3) Mr. Soest and Mr. Weisz. *Prerequisite: Physics 510 and 516.*

533-534. Advanced Topics in Solid State Physics. *Fall and Spring* (3,3) Mr. Weisz and Mr. Soest.

541-542. Advanced Nuclear Physics. *Fall and Spring* (3,3) Mr. Kossler. *Prerequisite: Physics 510.*

543. Introduction to Elementary Particle Physics. *Fall or Spring* (3) Mr. Yam.

545-546. High Energy Physics. *Fall and Spring* (3,3) Mr. Remler.

555. Atomic Spectroscopy. *Fall* (3) Mr. Champion. *Prerequisite: Physics 509.*

556. Molecular Spectroscopy. *Spring* (3) Mr. Champion. *Prerequisite: Students are strongly advised to have completed Physics 555 before enrolling in this course.*

***560. Master's Thesis.** *Fall and Spring* (hours and credits to be arranged).

561. Introduction to Astrophysics. *Fall* (3) Mr. Lawrence. *Prerequisite: Physics 501, 510.*

564. Physics of the Upper Atmosphere. *Spring* (3) Mr. Lawrence.

571. Theory of Ionized Gases. *Fall* (3) Mr. Gary.

572. Plasma Physics. *Spring* (3) Mr. Gary. This course may be repeated for credit when the instructor determines that this will not be prohibited by the duplication of material.

580. Colloquium. *Fall and Spring* (hours and credits to be arranged).

581, 582. Advanced Topics in Physics. *Fall and Spring* (hours and credits to be arranged).

***585. Research.** *Fall and Spring* (hours and credits to be arranged).

591. Special Topics in Physical Optics. *Fall* (3) Staff.

592. Applied Spectroscopy. *Spring* (3) Staff.

***660. Doctoral Dissertation.** *Fall and Spring* (hours and credits to be arranged).

Psychology

PROFESSORS WILLIAMS (*Chairman of the Department*), HARCUM,¹ JOHNSTON, AND LAMBERT. ASSOCIATE PROFESSORS DERKS, FRIEDMAN, McKENNA, CHAMBERS, AND SHEAN.² ASSISTANT PROFESSORS E. BAUER,² SHAVER, VENTIS, AND PAYNE. ACTING ASSISTANT PROFESSOR F. S. BAUER. LECTURERS ASHBURY, HAMMACK. LAB TECHNICIAN DAW.

REQUIREMENTS FOR CONCENTRATION

Degree of Bachelor of Arts: 30 credits in Psychology including 301 and 331.

Degree of Bachelor of Science: Concentration requirements for the B.S. are those listed above for the A.B. but in addition the student must meet the distribution requirements for the B.S. degree (pages 96-98). The preferred science is Biology.

Normal Program Recommended for Concentration: Psychology 201 and/or 202, 331, 301, 302.

DESCRIPTION OF COURSES

The Department of Psychology offers Freshman Seminars each semester on special topics on psychology.

150. Freshman Seminar. *Fall and Spring* (3,3) Staff.

201, 202. Principles of Psychology. *Fall and Spring* (3,3) Mr. Derks, Mr. McKenna and Staff.

201 is a study of the basic principles of behavior and perception, conditioning and learning, drives and motivation, response mechanisms. 202 is a continuation with emphasis on integrative processes; development, social processes, thinking, judgment, motivation, emotion, self- and personality theory. *Two class hours, two laboratory-discussion hours.*

***211, 212. Sophomore Research Seminar.** *Fall and Spring* (1,1) Mr. Shaver, Mr. Bauer.

Taken with 201, 202 by selected students interested in extra study and independent scholarship. Enrollment by invitation only. Hours to be arranged.

¹ On leave of absence, first semester, 1970-71.

² On leave of absence, second semester, 1970-71.

301, 302. Experimental Psychology. *Fall and Spring* (4,4) Mr. Friedman, Mr. Harcum and Staff. *Prerequisite:* 331.

This course presents information obtained by psychological research on the basic attributes of behavior, with emphasis on the methods by which the facts are obtained. *Three class hours, three laboratory hours.*

303. Industrial and Applied Psychology. *Fall* (3) Mr. Williams.

Psychology applied to industrial and military organizations. Uses of psychological tests in selecting and classifying personnel; methods of efficient work; the design of machines and communication systems for human use; industrial training.

310. History of Psychology. *Spring* (3) Mr. Williams.

From Aristotle to 1935 with special emphasis on the 19th and early 20th century. The rise of the major schools of thought: Structuralism, Functionalism, Gestalt psychology, Psychoanalysis and Behaviorism.

331. Statistics, Measurement, and Testing. *Fall and Spring* (3) Mr. Williams, Mr. Friedman.

An introduction to statistics, both descriptive and inferential, including non-parametric tests of significance and simple correlation. Basic principles of psychophysics and psychometric functions; theory test construction and item analysis, with a brief introduction to hypothesis testing and decision theory. *Two class hours, two laboratory hours.*

ADVANCED COURSES

Prerequisites: 201, 202 or equivalent evidence of maturity in psychology or cognate subjects as judged by instructor.

410. Systematic Psychology: Theories of Personality. *Fall* (3) Mr. McKenna.

A survey of contemporary theory in the field with emphasis on its empirical foundations and future possibilities.

403. Systematic Psychology: Theories of Learning and Perception. *Spring* (3) Mr. Derks.

A survey of contemporary theory in the field with emphasis on its empirical foundations and future possibilities

404. Physiological Psychology. *Fall* (3) Mrs. Bauer.

Physiological basis of behavior with emphasis on mechanisms in per-

ception, learning, emotion and motivation. *Two class hours, two laboratory hours.*

405. Abnormal Psychology. *Fall, Spring* (3) Mr. Payne.

A survey of behavior pathology including the neuroses and psychoses and their relationship to current conceptions of normal personality.

407. Motivation and Emotion. *Spring* (3) Mr. Johnston

Theories and facts of motivation and emotion and consideration of their differences, if any.

408. Theories of Behavior Modification. *Spring* (3) Mr. Shean.

Theory and practicum in methods in behavior modification for advanced students with some background in conditioning and learning and personality. *Two class hours, two or more laboratory hours.* (Not offered 1970-71.)

412, 413. Advanced General Psychology. *Fall and Spring* (3,3) Mr. McKenna, Mr. Derks.

An intensive review of the general principles of psychology as taught in 201, 202. *Two class hours, two laboratory hours.*

414. Educational Psychology. *Fall* (3) Mr. Ventis.

Individual differences in learning, growth and development in the context of psychological methods and educational aims.

416. Social Psychology. *Fall* (3) Mr. Shaver.

The effect of social context on the behavior of the individual, with emphasis on prominent theories and research. Some experiments will be performed and the relevance of social psychology for contemporary social issues will be considered.

417. Developmental Psychology. *Spring* (3) Mr. Ventis.

A study of human development from birth to maturity, with emphasis on physiological, social, emotional and intellectual processes. Both factual and theoretical approaches are considered.

419. Topics in Psychology. *Fall and Spring* (TBA)¹ Staff.

420. Seminar. *Fall and Spring* (2) Staff.

421. Research. *Fall and Spring* (TBA) Staff.

¹To be arranged.

431. Quantitative Methods. Spring (3) Mrs. Bauer.

An advanced course in statistics and experimental design. *Two class hours, two laboratory hours.* (Not offered 1970-71.)

495-496. Honors. Fall and Spring (3,3) Staff.

A student admitted to Honors Study is eligible for an award of Honors in Psychology on graduation.

Honors is independent study comprising (a) supervised reading in the field of the student's major interest, primarily in the original literature; (b) the preparation and presentation by May 1 of an Honors Essay based on the student's own research; and (c) satisfactory completion of a comprehensive examination in the field of the student's major interest.

GRADUATE PROGRAM

DOCTOR OF PHILOSOPHY DEGREE IN PSYCHOLOGY

Admission and Requirements

Each applicant for admission to the graduate program in psychology must file a completed application form and provide official transcripts of his academic record for all work done at the college or university level, his scores for the aptitude portion of the Graduate Record Examinations (or Miller Analogies Test, if requested) and letters of recommendation from three instructors. Applications must be completed by May 1 each year.

Minimum requirements for admission include an undergraduate degree from an accredited institution, an over-all academic average of 2.0 on a 3.0 scale (or a record judged to be nearly equivalent) and the completion of satisfactory work in Experimental Psychology (with laboratory), Statistics, and one foreign language.

Admission to the program will be made by the Committee on Graduate Studies on recommendation of the Department of Psychology. Only a few students will be admitted each year but each student will be automatically considered for an assistantship, either at the College or at the Eastern State Hospital, and for a scholarship sufficient to pay tuition.

Advancement to candidacy for the degree of Doctor of Philosophy is contingent upon meeting the following requirements:

1. Satisfactory completion of at least two academic years of full-time graduate study.
2. Possession of a reading knowledge of appropriate foreign languages as determined by examination.
3. Submission of an acceptable research paper.
4. Satisfactory performance in a General Comprehensive Examination, usually given at the end of the second year of study.

The degree of Doctor of Philosophy will be conferred upon candidates who have met the foregoing and the following requirements:

1. Presentation of a dissertation based on original research which makes a contribution to psychological knowledge. A defense of the dissertation topic must be made or an examination on its general area must be passed at least one year before the awarding of the degree. The dissertation must have been read and approved prior to April 1 in any given year. The student must make a final oral defense of his dissertation before the faculty.
2. Completion of at least one academic year of graduate study beyond the first in continuous residence as a full-time student at the College.

All requirements for the Ph.D. degree must be completed within seven years from the time of admission to graduate work.

GRADUATE COURSES

Required courses 500-level courses for first and second year students.

501, 502. Fundamentals of Behavior. *Fall and Spring* (3,3) Mr. Harcum, Mr. Derks, Mr. Friedman, Mr. Bauer.

Biological basis of behavior, response mechanism, conditioning, learning, memory, thought, motivation, emotion; sensory and physiological processes in vision, hearing, taste, smell, and skin sensitivities; psychophysics, perception of space and time; perception and cognition; target detection.

503, 504. Personality and Social Psychology. *Fall and Spring* (3,3) Mr. McKenna, Mr. Shaver and Staff.

Theories of personality and personality development, personality disorders and abnormal psychology; social learning and imitation, per-

ception of persons, social interest and attitudes, pairs and small groups, role theory.

531. Quantitative Methods. *Spring* (3) Mr. Friedman, Mr. Bauer.

A course in small sample theory, non-parametric statistics, analysis of variance, experimental design, partial and multiple correlation, and an introduction to scaling and measurement.

Elective Courses (May be required where appropriate).

505. Laboratory Techniques. *Fall or Spring* (3) Mr. Bauer.

Principles and methods of equipment design for psychological research. (Not offered 1970-71.)

506. Computer Applications in Psychology. *Fall or Spring* (3) Staff. (Not offered 1970-71.)

An introduction to computer logic and simulation, and the use of psychological processes.

507. Human Performance. *Fall or Spring* (3) Mr. Harcum, Mr. Williams.

Characteristics of human operators of machines; man-machine systems; skills; vigilance. (Not offered 1970-71.)

508. Advanced Physiological Psychology. *Spring* (3) Mrs. Bauer. *Prerequisite: Psychology 404.* (Not offered 1970-71.)

509. Comparative Psychology. *Fall or Spring* (3) Mr. Friedman.

Species comparisons, with special emphasis on mammalian behavior. Consideration of topics often called psychobiology or ethology. (Not offered 1970-71.)

510-513. Practicum in Advanced Abnormal Psychology. *Fall or Spring* (TBA) Mr. Shean and Staff of Eastern State Hospital.

This is a supplement to the practical experience gained as a student intern at Eastern State Hospital for which graduate credit may be awarded as appropriate. Typically one may learn diagnostic testing of intellectual functioning, case materials, research, and projective techniques. (It does not constitute an internship in clinical psychology.)

521. Research Problems in Psychology. *Fall and Spring* (TBA).

Course may be repeated. Research may be carried out either at

the College or the Eastern State Hospital. It may consist of experiments, research papers, or reviews of original literature.

533. Multivariate Analysis. *Fall or Spring* (3) Staff. *Prerequisite: Psychology 531-532 or strong mathematical background.*

Quantitative analysis of test data. (Not offered 1970-71.)

560. Thesis. *Prerequisite: Candidacy for the M.A. degree.*

Although this is a doctoral program, occasional M.A. degrees may be awarded, for which a thesis is required.

600-level courses for advanced students (those who have passed appropriate qualifying examinations). Electives for most students but required where needed. A few will be offered each year, as demand indicates, each for three credits, taught by appropriate members of the staff.

601, Conditioning and Learning; 602, Verbal Behavior and Psycholinguistics; 603, Cognition; 604, Developmental Psychology; 605, Social Behavior; 606, Personality; 607, Psychopathology; 608, Modification of Behavior; 609, Sensory Processes; 610, Perception; 611, Mathematical Models in Psychology; 612, Emotion and Motivation; 613, Philosophical Issues in Psychology; 614, Surgical and Medical Techniques in Laboratory Investigation; 616, Professional Problems in Psychology; 617-618, The Teaching of Psychology; A Seminar and Practicum; 620, Topical Seminars in Contemporary Research; 621, Research Practicum in Psychology; 622, Directed Reading in Fields of Psychology.

660. Dissertation. *Fall or Spring*, Staff. *Prerequisite: Advancement to candidacy for the Ph.D. degree.*

Religion

ASSOCIATE PROFESSOR LIVINGSTON (*Chairman of the Department*). ASSISTANT PROFESSORS HOLMES AND VAN HORN. LECTURER SCHOLNICK.¹

DESCRIPTION OF COURSES

201. Introduction to Religion. *Fall or Spring* (3) Mr. Livingston.

Religion as a dimension of human experience and culture. The beginnings of religion. Theories of the nature and function of religion. Types of religious phenomena: the sacred or holy; deity; myth, ritual and sacrament; law, faith and mystical insight. Relationship of religion to philosophy, science and art.

211. History of Religion in South Asia. *Fall* (3) Mr. Van Horn.

Introduction to the religious factors in the civilizations of the South Asian subcontinent from the earliest times to the present. The history, literatures, and practices of the Indus Valley Civilization, Vedism, Brahmanism, Jainism, Buddhism, Hinduism, Islam, and the current Hindu Renaissance.

212. History of Religion in East Asia. *Spring* (3) Mr. Van Horn.

Introduction to the religious systems of China and Japan, including the literatures, histories, thought patterns, and practices of the major schools of Confucianism, Taoism, Buddhism, and Shintoism.

219. History and Religion of Ancient Israel. *Fall* (3) Mr. Holmes, Mrs. Scholnick.

A literary and historical study of the major features of Hebrew-Jewish religion in the Hebrew scriptures and intertestamental periods, with special attention to Israel's relation to the cultures and religions of the Ancient Near East.

220. Christian Origins. *Spring* (3) Mr. Holmes.

A study of the beginnings of Christianity in the New Testament. Includes analysis of the relation of primitive Christianity to Judaism and Hellenistic culture, the formation of the Gospels, the life and teachings of Jesus, the Pauline writings, and the emergence of post-apostolic Christianity.

¹ On The Jewish Community Council of Newport News Lectureship in Religion.

305. History of Christianity: The Classical Period. *Fall* (3) Mr. Holmes.

A history of Christian thought and institutions from the second through the sixteenth century, with emphasis on the beginnings of Catholic doctrine, the Christological and Trinitarian controversies, Monasticism, Augustine, Early and High Scholasticism, and the beginnings of the Reformation. (Not offered 1971-72.)

306. History of Christianity: The Modern Period. *Spring* (3) Mr. Livingston.

A study of the influence of secular ideas and events on Christian thought and institutions since the seventeenth century. Special attention is given to such movements as the rise of modern science, Rationalism, Romanticism, Liberalism, Darwinism, Totalitarianism, Existentialism and Ecumenism.

309. History of Religion in America. *Fall or Spring* (3) Mr. Holmes.

An intellectual and institutional history of organized religion in the United States, with emphasis on the history and beliefs of selected Christian churches and sectarian movements.

312. Judaism in America. *Spring* (3) Mrs. Scholnick.

A study of the arrival of the Jews in America, the development of the religion in the new world, and the contemporary Jewish experience in America. The course will include a study of leading Jewish thinkers and writers.

315. The Protestant and Catholic Reformations. *Fall* (3) Mr. Holmes.

A study of the personalities, movements, teachings, and religious consequences of the Protestant and Catholic Reformations of the sixteenth century. Includes Luther, Calvin, Zwingli, the Protestant Radicals, Erasmus, Loyola, the Council of Trent, and the English Reformation. (Not offered 1970-71.)

319. Buddhism in South Asia. *Fall* (3) Mr. Van Horn.

An intensive study of the Buddhist origins and development in India and the history of the South Asian schools. The classical literature, practices, and beliefs of Buddhism in South Asia, with emphasis on the Theravada school of present Ceylon, Burma, Thailand, etc.

320. Buddhism in East Asia. *Spring* (3) Mr. Van Horn.

A study of the assimilation of Buddhism in China and Japan. Emphasis upon the literatures, practices, and philosophical statements of Mahayana Buddhism in its various Chinese and Japanese forms. (Not offered 1971-72.)

340. Modern Hinduism. *Spring* (3) Mr. Van Horn.

A brief survey of the essentials of classical Hindu traditions, followed by an extensive examination of the interactions between these traditions and "Westernization" or "Modernization." Emphasis will be placed upon Ram Mohan Roy, Dayananda, Ramakrishna, Tagore, Gandhi, Radhakrishnan, and to "Universal Hinduism." (Not offered 1970-71.)

425. Contemporary Religious Thought. *Fall* (3) Mr. Livingston.

Central themes in twentieth century religious thought examined through the works of several significant thinkers, such as Buber, Tillich, Marcel, Niebuhr, Teilhard de Chardin, Bultmann, D. T. Suzuki.

Secretarial Science

ASSOCIATE PROFESSOR LOTT.

The following courses in Shorthand and Typewriting are open to students as elective courses, regardless of their fields of concentration. It is strongly recommended that students who plan to work as secretaries begin this course in their junior year or earlier. These courses may be taken as part of a student's regular schedule. Credit for courses will not be offered beginning September 1971.

Personal Typewriting is open to any student and is taken without credit.

SHORTHAND AND TYPEWRITING

301-302. Fundamentals of Shorthand and Typewriting.¹ *Fall and Spring* (3) Miss Lott.

Fundamentals of Gregg Shorthand Simplified and the touch system of typewriting. Taking shorthand from dictation and transcribing notes stressed in second semester.

401. Advanced Shorthand and Secretarial Practices. *Fall* (3) Miss Lott. *Prerequisites:* *Sec. Sci. 301, 302, or knowledge of elementary shorthand and typewriting.*

Advanced shorthand and typing with emphasis on developing speed and accuracy in taking dictation and transcribing notes; office machines.

402. Secretarial Practice. *Spring* (3) Miss Lott. *Prerequisite:* *Consent of instructor.*

Training for a professional secretarial career. Correct application of basic skills; use of reference materials; study of duties and personal requirements for responsible secretaries; use of transcription machines. Shorthand is not a prerequisite. *Three class hours, three laboratory hours.*

PERSONAL TYPEWRITING

101. Personal Typewriting. *Fall and Spring* (0) Miss Lott.

This course is designed to give training in the fundamentals of touch typewriting with special emphasis on typing term papers, outlines and business letters. *Two hours a week.*

¹Students who have not had typewriting previously must take three hours of typewriting per week; no credit given for typewriting.

Sociology

PROFESSORS E. RHYNE (*Chairman of the Department*), KERNODLE, AND VANFOSSEN. ASSOCIATE PROFESSORS EDMONDS, FAIA, AND LIGUORI. ASSISTANT PROFESSORS BECKHOUSE, GUENTHER, HUMPHREY, ITO,¹ KERNER, R. MILLER AND THOMO.² ACTING ASSISTANT PROFESSOR L. RHYNE. ACTING INSTRUCTOR PEEBLES.

REQUIREMENTS FOR CONCENTRATION

Concentration in Sociology requires a minimum of thirty semester credits and must include: 201, 303, 307, and 401-402 or 495-496. Freshmen who take a seminar version of Principles of Sociology may substitute Freshman Seminar 150 for Soc. 201.

DESCRIPTION OF COURSES

201. Principles of Sociology. *Fall and Spring* (3) Staff.

An introduction to the study of human society with emphasis on the basic principles of sociology. Principal concepts developed include society, culture, status and role, socialization and personality, stratification, social organization and institutions, and social change. This course, in providing an integrated set of general principles, is the appropriate introduction to further study in sociology.

201H. Principles of Sociology. *Fall and Spring* (3) Staff.

This is a special section of Principles of Sociology 201 designed for Honors students.

303. Sociological Theory. *Fall* (3) Mr. Kerner.

Examination of the historical foundations of sociological theory and the establishment of a basis for rational, objective analysis of recent social phenomena. The contributions of 19th century theorists are traced to provide a framework for the study of contemporary concepts in the field.

307. Introduction to Social Statistics. *Fall or Spring* (3) Mr. Faia.

The applications and limitations of statistics are presented as means

¹ On leave of absence first semester 1970-1971.

² On partial leave of absence second semester 1970-1971.

of providing tools whereby statistical methods may be recognized, interpreted, and applied in sociological research. Included are considerations of averages, measures of dispersion and variance, simple linear correlation and sampling theory. Emphasis on the logic of procedures, not on mathematical derivations. *Three class hours, two laboratory hours.*

311. Values and Social Control. *Fall* (3) Mr. Vanfossen. *Pre-requisite: Sociology 201 or consent of instructor.*

An analysis of the nature and types of human values and the universal techniques of social control as these relate to individual and group conformity and deviation, and social stability and change.

313. Social Stratification. *Fall* (3) Miss Themo.

Examination of the principal structural units of society. Central focus is on the concepts of differentiation, hierarchy, class, caste, and economic, prestige, and power orders. Comparative analysis, historical and cross-cultural, is followed by consideration of class structure in the United States.

319. Population Problems. *Spring* (3) Mr. Humphrey.

A consideration of the manner in which populations grow and decline and the effects of such change on society. Emphasis is on theories of population growth, distribution, births, deaths, internal and international migration, bio-social and sociological composition. Included are discussions of the sources of data and techniques and methods of analysis, as well as contemporary population problems.

320. Social Problems. *Fall and Spring* (3) Mr. Miller.

A survey of social problems such as poverty, urban conditions, race relations, delinquency and crime, and other recurring problems of major concern to contemporary society. The analytic perspective is primarily sociological, stressing concepts drawn from substantive sub-fields of the discipline.

321. Sociology of Social Welfare. *Fall* (3) Mr. Miller.

A study of the history and problems of welfare institutions and their functions in human society. Attention is given to contemporary welfare institutions as they relate to social structure and the other major institutions within it. The place of contemporary social work practice will be considered in this context.

322. Criminology. *Fall* (3) Mr. Guenther.

An analysis of trends in criminal behavior; emphasis is on theory and research in causation and treatment. Attention is given to criminal careers, to police and correctional systems as control agencies, and to criminal law as an instrument of moral condemnation, retribution and deterrence.

326. Racial and Cultural Minorities. *Fall or Spring* (3) Staff.

Distinctions of race and ethnicity in American society and their impact on inter-group relationships and public policy. Attention is given to the nature of racist ideology, to prejudice and discrimination, and to an analysis of "the culture of poverty". Considered also are less frequently examined and non-problem minority groups.

328. Black-White Relationships in American Society. *Fall or Spring* (3) Mrs. Rhyne.

Demographic and institutional variations among black and white Americans examined in a context of ideological as well as structural change; consequences of racial prejudice and discrimination for black personality and social structure. The Negro heritage in its relationship to the development of black consciousness is also analyzed.

330. Sociology of Mental Illness. *Spring* (3) Mr. Kernodle. *Prerequisite: Sociology 201 or consent of instructor.*

A study of sociological aspects of mental illness. The social and cultural sources of mental illness, types of mental disorders and their distribution within the social structure, and social factors in the treatment of mental illness will be scrutinized. Consideration of the mental hospital as a social system.

332. Marriage and the Family. *Fall* (3) Mr. Kernodle.

Analysis of the social relationships among people in courtship, marriage and family situations. Interrelations of family institutions and other parts of social structures. Intensive study of American family structure and relevant examples drawn from other cultures.

334. Sociology of Religion. *Spring* (3) Mr. Edmonds.

Conceptions of the supernatural in examination of religious beliefs and practices; development of religious groups and institutions; relation of religion to social structure and social change.

335. Sociology of Education. *Spring* (3) Mr. Ito.

The school as a social institution, as a bureaucratic organization, and

in a context of change. Attention is given to the differential impact of social class, family, race, and residence on educational opportunity. Current problems in higher education are considered.

349. Human Geography. *Fall* (3) Mr. Rhyne. *Prerequisite: Geology 105 or consent of instructor.*

A study of the adjustment of human societies to their physical environment. Emphasis is on the spatial distribution of human population, cultural forms, and social types. Comparisons are offered of different social reactions to similar geographic conditions.

350. The Sociology of Small Groups. *Spring* (3) Mr. Beckhouse. *Prerequisite: Sociology 201, or Psychology 201, or consent of instructor.*

Introduction to theory and research of small group analysis. The structural properties and processes of small groups, theoretical perspectives used to explain social interaction within the small group context, interpersonal influence, role differentiation, behavioral tactics, and social control within groups are examined.

352. The Sociology of Developing Countries. *Spring* (3) Miss Themo.

Examination of processes inherent in cultural, political, and economic development within both emergent and established "under-developed" nations. Focus is on institutional structures and attitude systems supporting modernization of traditional social orders. Main substantive materials are drawn from contemporary Latin America.

401-402. Social Research. *Fall and Spring* (3,3) Staff. *Prerequisites: Soc. 201, 307.*

404. History of Social Thought. *Spring* (3) Mr. Rhyne.

A survey of the major strands in social thought in the West and the influence of these on the founding and development of sociology as a separate discipline. (Not offered in 1970-71.)

406. Socialization and Society. *Spring* (3) Mr. Beckhouse.

Analysis of theoretical and empirical issues relevant to socialization. Emphasis is upon the generic process by which individuals become members of society, with special consideration on the impact of socio-economic class, race, and family structure on socialization. Specific examination of socialization beyond childhood is also offered.

408. Intermediate Social Statistics. *Spring* (3) Mr. Ito. *Prerequisite: Soc. 307 or equivalent. Sociology 401 recommended.*

A brief review of the logic underlying inductive statistics and tests of significance of single variables followed by tests of significance involving two or more variables. Parametric and non-parametric measures of relationship between two or more variables will also be considered. (Not offered in 1970-71.)

410. Deviant Behavior. *Spring* (3) Mr. Guenther.

Analysis of behavior which violates institutionalized expectations, yet is not necessarily "pathological" or illegal: college cheating, homosexuality, nudism, drug and alcohol abuse, and suicide, for example. Focus is on the internalization of norms and values, sanctioning and stigmatization, and the development of deviant careers.

411. Mass Society and Commitment. *Fall* (3) Mr. Vanfossen.

A study of communication, the mass media, and popular culture as these relate to the overall style of life and the structure of modern society. Attention is given to public opinion and changing social values; factors of power, authority, and dissent; personal and social freedom, commitment, and responsibility; and the broader issue of social cohesion and conflict in a heterogeneous society.

413. Urban Sociology. *Fall* (3) Mr. Humphrey.

The emergence and structure of the city in historical and cross cultural perspective, with special attention to the phenomena of urbanization and urbanism in the United States. Consideration of urban structure from both ecological and social perspectives; analysis of change in urban structure; selected problems associated with urban growth and life.

416. Social Movements. *Spring* (3) Mr. Rhyne.

A study of the social and cultural characteristics of contemporary social movements such as liberalism, democracy, socialism, communism, fascism. A critical evaluation is made of the philosophies, social foundations, and organizations of important movements. Emphasis on the interplay of these three factors.

431. Industrial Sociology. *Spring* (3) Mr. Kerner. *Prerequisite: nine hours of sociology courses including Soc. 201.*

A sociological and social psychological assessment of complex industrial organizations including a survey of the development of or-

ganizational analysis. Individual, group, and system levels of analysis are presented, culminating with a consideration of organizational adaptation for effective utilization of human resources.

433. The Structure of Power. *Fall* (3) Mr. Rhyne.

The organization of power and authority within the social order. Comparison drawn between different power structures in terms of differences in the social order. An investigation of the writings of some of the major theorists (some combination from Marx, Mosca, Lenin, Pareto, Michels, or Sorel and contemporary authors) on social and political power is undertaken. (Not offered in 1970-71.)

438. Social Psychology of Human Groups. *Spring* (3) Mr. Edmonds.

Examination of the social sources of individual experience and behavior with particular emphasis upon relations within and between human groups. Among the topics considered are human learning, human thought and language, personality development, socialization, social persuasion, crowd behavior, fads, fashions, and social movements.

†440. **Special Problems in Sociology.** *Fall or Spring* (3) For sociology majors only and upon consent of the Head of the Department.

***480. Readings in Sociology.** *Fall or Spring* (3) Staff.

Independent readings directed toward conceptual topics in sociology such as the history of social thought, theory, social structure, stratification, power. The student will read materials in his area of interest in consultation with an appropriate member of the staff. Before registering for the course, the student must obtain written permission from the instructor who will direct the readings.

***481. Readings in Sociology.** *Fall or Spring* (3) Staff.

Independent readings focusing on substantive areas within sociology such as crime, delinquency, racial and ethnic groups, family, mental illness, urban problems. The student will read materials in his area of interest in consultation with an appropriate member of the staff. Before registering for the course, the student must obtain written permission from the instructor who will direct the readings.

HONORS STUDY

495-496. Honors. *Fall and Spring* (3,3) Staff.

Sociology honors candidates enroll for both semesters of their senior year. Requirements include: auditing Sociology 401 with responsibility for all assignments except examinations; preparation, under supervision of a thesis advisor, and presentation by May 1 of an honors essay or project; and satisfactory performance in a comprehensive oral examination which focuses on the honors thesis or project.

MASTER OF ARTS DEGREE IN SOCIOLOGY

Requirements for the Degree of Master of Arts in Sociology

The candidate for the degree of Master of Arts in Sociology must meet the following requirements in addition to the general requirements stated on page 106 of this catalog.

1. After consultation with the Department of Sociology the candidate will select a co-ordinated set of courses; undergraduate courses may be required in areas where the candidate's preparation is incomplete.
2. In addition to Sociology 560 (Thesis; 3 to 6 credits) the candidate must successfully complete 24 credits of which at least fifteen credits must be at the 500 level and must include Sociology 501, 502 and one seminar (Sociology 511-520). Courses at the 400 level which are applied toward the degree must be completed with a grade of B or better.
3. With the approval of the department a maximum of 12 credits may be taken in a discipline other than Sociology.
4. A residence period of one academic year is required.
5. The candidate must demonstrate a reading knowledge of one foreign language, preferably French or German, in the subject matter of sociology.
6. Each candidate will be assigned a major professor and a committee who will be responsible for planning the candidate's program and the supervision of his thesis.
7. A written and oral examination, covering the candidate's thesis and his major areas of study is required.

GRADUATE COURSES

501-502. Issues in Contemporary Sociology. *Fall and Spring* (3,3) Staff.

This course is designed to acquaint the student with the central tendencies in sociology. Each topical unit will be considered in its

historical development, in the chief theoretical and methodological issues arising in it, and in the main currents of contemporary research.

511-520. Seminars in Sociology. Fall or Spring (3) Staff.

Each course will devote itself to the intensive study of the major literature in separate areas of sociology. A previous familiarity with the general subject matter is presumed on the part of the candidate, and mastery of current research strategies in the subject area is stressed. A minimum of two seminars is offered each semester.

511. *American Social Thought.*

512. *Comparative Social Structures.*

513. *Demographic Analysis.*

514. *Family Institutions.*

515. *Racial and Ethnic Relations.*

516. *Social Problems and Social Welfare.*

517. *Sociology of Personal Disorders and Mental Illness.*

518. *Complex Organization.*

519. *Philosophical Issues in the Social Sciences.*

520. *Human Values and Social Control.*

560. Thesis. Hours to be arranged. STAFF.

Theatre and Speech

PROFESSOR SCAMMON (*Chairman of the Department*). ASSOCIATE PROFESSORS CATRON, HAAK, AND SHERMAN. ASSISTANT PROFESSORS BROWN, MILLER, MICKEN. INSTRUCTORS KREMER, PENCE.

The Department of Theatre and Speech offers a concentration in Theatre.

REQUIREMENTS FOR CONCENTRATION IN THEATRE

A student must take Theatre 204, 205, either 305 or 306, 315, 316, 403, 404 and either 317 or 407. A student must complete six additional hours in departmental offerings in Theatre.

THEATRE

204. Introduction to Theatre Arts. *Fall or Spring* (3) Mr. Catron, Mr. Scammon.

A survey of the arts of the theatre, plus study of dramatic literature of major periods of theatrical history. Theories and techniques of play-writing, acting and directing will be studied then put into actual practice during laboratory sessions. *Two class hours, two laboratory hours.*

205. Introduction to Technical Production. *Fall or Spring* (3) Mr. Haak, Mr. Miller, Mr. Sherman.

Study and practice of technical components of the theatre: costuming, lighting, sound, makeup, properties, stage rigging and scene design, construction, and painting. *Two class hours, two laboratory hours.*

+206. Makeup. *Spring* (3) Mr. Sherman.

Study and practice of makeup in relation to light, shade and color; character analysis study, showing the effects of heredity, temperament, environment, health and age. Students in this course assist in William and Mary Theatre productions. *Six studio hours.*

***301-302. Acting.** *Fall and Spring* (3,3) Mr. Scammon.

Critical analysis and appreciation of acting developed by lectures, reading and discussion, and presentation of individual and group scenes.

305-306. Stagecraft. *Fall and Spring* (3,3) Mr. Haak.

Study and practice in technical problems; working drawings, construction, scene painting, rigging, and handling of scenery, properties, lighting, backstage organization, and sound effects. Students in this course act as technicians for William and Mary Theatre productions. *Workshop six hours.*

309-310. Design for the Theatre. *Fall and Spring* (3,3) Mr. Miller.

Basic analysis of the visual elements of theatrical production. Lectures and demonstrations on significant historical periods. Emphasis is placed on watercolor sketching, scene painting, drafting. Students act as technicians for William and Mary Theatre productions. *Studio six hours.*

312. History and Appreciation of the Motion Picture. *Fall or Spring* (2) Mr. Haak.

Survey of the historical development of the film in Europe and America, and of organization, management, and mechanical process in production. In laboratory, historic and current films illustrating lecture material are shown. *Two class hours; two laboratory hours.*

313. Introduction to Stage Lighting. *Fall* (3) Mr. Sherman.

Methods and materials of stage lighting, with emphasis on the study of the functions and qualities of light, instruments, control equipment, and procedure. Students will assist with William and Mary Theatre productions. *Two class hours; two laboratory hours.*

314. Stage Lighting Design. *Spring* (3) Mr. Sherman. *Prerequisite: Theatre 313 or consent of instructor.*

Theory and technique of stage lighting design, with emphasis on artistic considerations and its value to the director as an interpretative tool. Students will assist with William and Mary Theatre productions. *Two class hours; two laboratory hours.*

315. History of the Classical and Medieval Theatre. *Fall* (3) Mr. Scammon.

Study of the forms of the drama, development of the theatre and techniques of the stage of the Greek, Roman and Medieval Ages.

316. History of the Renaissance, Eighteenth and Nineteenth Century Theatre. *Spring* (3) Mr. Scammon.

Study of the forms of the drama, development of the theatre and

techniques of the stage in the Renaissance, Eighteenth and Nineteenth centuries.

317-318. Playwriting. *Fall and Spring* (3,3) Mr. Catron.

Study of dramatic structure and introduction to writing plays for the stage. Composition is accompanied by reading and analysis of dramatic literature. Discussions, lectures, and readings help the student find a dramaturgical form to express his ideas. Worthy scripts may receive production.

319-320. Theatre Administration. *Fall and Spring* (3,3) Mr. Sherman.

The principles of management applied to the fields of theatre operations, production and performance, with emphasis given to promotion, box-office procedures and house management.

***321-322. Costume Design for the Theatre.** *Fall and Spring* (3,3) Mr. Miller.

Lectures of historic period costume. Practice in sketching, construction, form, color and detail for stage costumes. Students serve as costumers for William and Mary Theatre productions. Advanced students may serve as designers for Theatre productions.

403-404. Seminar in Contemporary Drama. *Fall and Spring* (3,3) Mr. Catron.

Analysis of late nineteenth and twentieth century drama with special emphasis on forms and styles of the "modernism" movement. *Lectures, discussion and research.*

***407-408. Direction.** *Fall and Spring* (3,3) Mr. Scammon.

Study and practice in the principles of choosing the play, casting, rehearsals, and performance. Special emphasis on direction of one-act plays. *Two class hours; six laboratory hours.*

409. Seminar in the Modern Theatre since 1950. *Fall* (3) Mr. Catron.

A study of the latest trends and movements in Theatre. The course places focus upon new concepts of theatre, new styles of theatrical organizations and new playwrights.

410. History of the American Theatre. *Spring* (3) Mr. Catron.

The history of the theatre in America from its beginnings in Wil-

liamsburg up to more recent times. Readings of plays and texts are designed to present the more significant developments in American theatre history.

***411. Problems in Theatre.** *Fall or Spring* Staff.

Independent study on a special problem for the advanced student, arranged on an individual basis with credit according to work done.

SPEECH

201. Public Speaking. *Fall or Spring* (3) Miss Kremer, Mr. Micken.

Understanding and application of the principles of public speaking. Analysis of speeches based on organization, content, and delivery.

202. Voice and Diction. *Fall or Spring* (3) Mrs. Brown.

Study of processes of oral speech, including development of speech in young children, physics of sound, physiological, psychological and social bases of speech and phonetics. Training in voice production, articulation, pronunciation and quality.

203. Oral Interpretation. *Fall* (3) Mrs. Brown.

Study of basic principles in techniques of oral interpretation. Use of body, voice, analysis of materials, reading and evaluations of prose and poetry. *Three class hours, one laboratory hour.*

204. Advanced Oral Interpretation. *Spring* (3) Mrs. Brown.
Prerequisite: Speech 203 or consent of the instructor.

Continuation of Speech 203 with emphasis on presentation of several forms of literature. *Three class hours, one laboratory hour.*

301. Foundations of Broadcasting. *Fall* (3) Mr. Pence.

An examination of the history and evolution of broadcasting as it exists in the United States, with consideration of business, regulatory and social aspects as they relate to the contemporary system.

302. Beginning Broadcast Production. *Spring* (3) Mr. Pence.
Prerequisite: Speech 301 or consent of the instructor.

Fundamentals of radio program production. Emphasis on production and methods and problems at the level of the local station. Laboratory work involves the application of program and production theory. *Two class hours; two laboratory hours.*

308. Speech Composition and Briefing. *Spring* (3) Mr. Micken.

Study of the special techniques of speech construction as applied to advanced forms of public address, emphasizing structure, arrangement, and style. Special attention given to the application of the principles to persuasion and to argumentation. (Not offered 1971-1972.)

309. Argumentation and Debate. *Fall* (3) Mr. Micken.

Training in the techniques and practices of argumentative speaking, study and analysis of debate propositions, preparation of the brief, research and selection of evidence, and practice in rebuttal and refutation. Lectures and class debating.

310. Principles of Group Discussion. *Spring* (3) Mr. Micken.

Study of logical and psychological foundations of discussion as a method of dealing with public questions, considering problems of adjustment, communication and collaborative action in small groups. Emphasis on principles, types and methods of discussion. Lectures and practice participation. (Not offered 1970-71.) (Alternates with Speech 308.)

401. Studio Operations: Directing for Television. *Fall* (3) Mr. Pence. *Prerequisite:* Speech 301 or 302 or consent of the instructor.

A study of theory and methods of television production and direction. Detailed examination of cameras, lights, audio, graphics, design and responsibilities of studio and control room personnel. *Two class hours; two laboratory hours.*

402. Television Writing and Production. *Spring* (3) Mr. Pence. *Prerequisite:* Speech 401.

A study of the theory and methods of writing, producing and directing for television with emphasis on limitations and responsibilities of the medium. Opportunity to supervise all aspects of television production including film production for television. *Two class hours, two laboratory hours.*

Graduate Program in Applied Science

Applied Science at the College of William and Mary is an interdisciplinary graduate program which leads to a M.S. degree. Courses will be taught on the main campus and at the Virginia Associated Research Campus (VARC) in Newport News on a rotating basis so that students can methodically pursue a degree by taking most courses at the Research Campus.

The program is offered cooperatively by the following participating faculty from the departments of chemistry, mathematics, and physics:

Chemistry: Djordjevic, Hill, Kiefer, Kranbuehl, Orwoll, Thompson, Tyree.

Mathematics: Baker, Bangs, Bynum, Cato, Drew, Gibbs, Lawrence, Melvin, O'Neil, Poole, Prosl, Rabinowitz, Reynolds, Rublein, Sanwal, Southworth, Stanford.

Physics: Andersen, Bloomberg, Champion, Crownfield, Doverspike, Gary, Kossler, Lawrence, Remler, Schone, Sher (Director), Soest, von Baeyer, Weisz, Welsh, Winter.

The program is intended for students who wish an education with a focus which differs from that of traditional departments. This difference may arise from a course sequence which is interdisciplinary or one which is more specialized than usual within a department. The Applied Science program is organized as follows:

I. Applied Mathematics and Computer Science Area

A. Applied Mathematics Division

1. Probability and Statistics Specialization
2. Partial Differential Equations Specialization
3. Ordinary Differential Equations Specialization

B. Computer Science Division

1. Computer Languages and Programming Systems Specialization
2. Numerical Analysis Specialization
3. Mathematical Programming and Simulation Specialization

II. Chemical Physics Area

A. Atmospheric and Plasma Science Division

1. Atmospheric Science Specialization
2. Ion-Molecule Reaction Specialization
3. Plasma Specialization

B. Liquids and Solids Division

1. Polymers Specialization
2. Crystalline Materials Preparation Specialization
3. Physics of Electronic Devices Specialization

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN APPLIED SCIENCE

A student and a faculty adviser will plan a coherent program leading to the M.S. degree which best suits the student's educational goals. This program must be approved by the Applied Science Council. The Master of Science degree in Applied Science is offered with and without thesis. With thesis the student is required to complete twenty-four hours of course work, and without thesis thirty-two hours are required. In addition, the candidate must demonstrate a reading knowledge of French, German, or Russian in an area of applied science. The candidate must also pass a qualifying examination which covers undergraduate material, the content of the first year graduate courses, and other relevant topics.

GRADUATE COURSES

Most students in the Applied Science program will select their courses from the following list:

Chemistry: 401, 402, 404, 405, 501, 502, 503, 504, 509.

Mathematics: 401, 402, 403, 404, 405, 406, 407, 408, 410, 413, 414, 501, 502, 503, 504, 505, 506, 509, 510, 511, 512, 521, 522, 523, 524, 529, 530, 531, 532, 541, 542, 555.

Physics: 401, 402, 411, 412, 475, 501, 505, 506, 509, 510, 511, 512, 516, 517, 521, 522, 531, 532, 533, 534, 555, 556, 561, 564, 571, 572.

A.S. 501, 502. Introduction to Systems Programming. *Fall and Spring (3,3). Prerequisites: A good knowledge of Fortran and Assembly language.* Gibbs.

A.S. 503. Higher Level Languages. *Spring (3). Prerequisites: Knowledge of one or more higher level languages such as Fortran, Algol, or PL/I.* Gibbs.

A.S. 507. Introduction to Automata Theory. *Fall (3). Prerequisite: Math 407. Staff.*

A.S. 508. Introduction to the Theory of Computability. *Spring (3). Prerequisite: Math 407. Staff.*

A.S. 509. Mathematical Programming. *Fall (3). Prerequisite: Math 312, 408. Staff.*

A.S. 510. System Simulation. *Spring (3). Prerequisite: Math 312. Staff.*

A.S. 511. Artificial Intelligence. *Spring (3). Prerequisite: A.S. 510. Staff.*

A.S. 513, 514. Advanced Numerical Analysis. *Fall and Spring (3,3). Prerequisites: Math 312, 408, 414 or consent of the instructor. Poole.*

A.S. 521, 522. Solid State Chemistry. *Fall and Spring (3,3). Prerequisite: Chem. 402 or Phys. 516. Sher, Soest.*

A.S. 535, 536. Introduction to Mathematical Fluid Dynamics. *Fall and Spring (3,3). Prerequisite: Consent of instructor. Baker.*

A.S. 550. Readings in Applied Science. *Fall or Spring (1-3).*

A.S. 560. Thesis. *Hours to be arranged.*

A.S. 585. Research. *Hours to be arranged.*

SCHOOL OF BUSINESS ADMINISTRATION

PROFESSORS QUITMEYER (*Dean of the School of Business Administration*), COREY, KING (*Associate Dean for Undergraduate Studies, School of Business Administration*), QUINN, SANCETTA (*Associate Dean for Graduate Studies, School of Business Administration*), AND TRAYWICK (*Director of the Bureau of Business Research*). ASSOCIATE PROFESSORS DAFASHY, MCCORMICK, WARREN, AND WOODWARD. ASSISTANT PROFESSORS BAXLEY,¹ COLE (*Director of Conferences*), ELGERS, GLEYSTEN, JONES, O'CONNELL, SMITH, STANLEY AND TARLETON. LECTURERS FILES, GRAVES, MARSH, MCNAIRY, PETERSON, AND SRIDHARAN.

The School of Business Administration offers both an undergraduate program and a graduate program in Business Administration.

Starting with the first semester of 1971-72, the undergraduate program will lead only to the degree of Bachelor of Business Administration (B.B.A.) except that students previously pursuing the degree of Bachelor of Arts (A.B.) with a concentration in Business Administration in either Accounting or Management will continue toward the completion of that degree. The B.B.A. degree will carry a choice among three subprograms, two being in Accounting (one with a Certified Public Accountant (C.P.A.) orientation and one without) and one being in Management.

The graduate program leads to the degree of Master of Business Administration (M.B.A.).

The Bureau of Business Research of the School renders a service to the Virginia business community with its monthly publication, the Virginia Business Index Report, which reflects current business and economic activity in the State. The Bureau also publishes monthly the Williamsburg Business Index Report. In addition, the Bureau from time to time publishes special research studies.

Further service to the business community is provided by the School through sponsorship of business conferences and projects.

CURRICULUM REQUIREMENTS

Prior to the student's junior year, only at which time, or later, admission to the School and its B.B.A. degree program may occur, the student must follow and complete the area requirements in Arts and Sciences consisting of a minimum of two semester courses in each of the three Arts and Sciences areas and two additional semester courses

¹ On leave of absence 1970-71.

outside of Area II so that at least four semester courses outside of Area II form a logical sequence of introductory and advanced courses or a logical combination of courses on an interdisciplinary topic. Also, the student must complete whatever requirements in Arts and Sciences prevail in regard to English, Foreign Language, and Physical Education. However, the student should take, during the sophomore year, Business 201-202 (Principles of Accounting). No other Business Administration course may be taken before the student's junior year.

Prerequisites to admission to the School are six semester credits in mathematics and six semester credits in economics which satisfy the area requirements in these subjects.

Before being graduated with the B.B.A. degree, the student must have completed a minimum of sixty semester credits in Arts and Sciences academic subjects.

Upon admission to the School of Business Administration, the following requirements for completion of the B.B.A. degree, subject to the aforementioned curriculum requirements, will hold for each of the School's three subprograms. A 1.0 quality point average is required, counting all courses for which quality point grades are given, and a 1.0 quality point average in all Business Administration courses taken in which quality point grades are given.

Upon admission to the School of Business Administration all candidates for the B.B.A. degree shall come under the jurisdiction of the School's administration, including its Committee on Academic Status and Committee on Degrees, in all matters appropriately pertaining thereto.

In addition to the general requirement of a minimum of sixty semester credits in Arts and Sciences academic subjects, the Business Administration course requirements common to all three subprograms are as follows:

<i>Subject</i>	<i>Semester Credits</i>
Business 201-202 (Principles of Accounting)	6
Business 311 (Principles of Marketing)	3
Business 316 (Behavioral Science and the Business Organization)	3
Business 323 (Financial Management)	3
Business 330 (Production Management)	3
Business 331 (Business Statistics)	3
Business 341 (Business Law I)	3
Business 416 (Business Policy)	3
Total	27

For the subprogram in Accounting with a Certified Public Accountant (C.P.A.) orientation the remaining requirements for the B.B.A. degree are:

<i>Subject</i>	<i>Semester Credits</i>
Business 301-302 (Intermediate Accounting)	6
Business 303 (Cost Accounting)	3
Business 318 (Quantitative Analysis for Business Decisions)	3
Business 342 (Business Law II)	3
Business 401 (Advanced Accounting)	3
Business 402 (Specialized Accounting Systems)	3
Business 404 (Auditing)	3
Business 407 (Seminar in Accounting)	3
Business 409 (Accounting Systems and Data Processing)	3
Federal Taxation	3
Total	33

For the subprogram in Accounting not C.P.A. oriented the remaining requirements for the B.B.A. degree are:

<i>Subject</i>	<i>Semester Credits</i>
Business 301-302 (Intermediate Accounting)	6
Business 303 (Cost Accounting)	3
Business 401 (Advanced Accounting)	3
Business 407 (Seminar in Accounting)	3
Business 409 (Accounting Systems and Data Processing)	3
Federal Taxation	3
Electives	12
Total	33

For the subprogram in Management the remaining requirements for the B.B.A. degree are:

<i>Subject</i>	<i>Semester Credits</i>
Business 315 (Industrial Relations)	3
Business 318 (Quantitative Analysis for Business Decisions)	3
Business 327 (Principles of Management)	3
Business 334 (Business Simulation Analysis)	3
Business 430 (Seminar in Business Research)	3
Electives	18
Total	33

DEPARTMENTS OF INSTRUCTION

ACCOUNTING

PROFESSOR QUINN (*Head of the Department*).

DESCRIPTION OF COURSES

(Junior or higher standing is required before admission to any of the following courses, except that sophomore or higher standing is required for admission to Business 201-202.)

201-202. Principles of Accounting. *Fall and Spring (3,3) Staff.*

A study of the elementary principles and procedures of individual proprietorship, partnership, and corporation accounting.

301-302. Intermediate Accounting. *Fall and Spring (3,3) Mr. Quinn. Prerequisites: Bus. 201-202.*

An analysis of balance sheets and profit and loss statements, together with the theory of valuation underlying the various accounts used in these statements.

303. Cost Accounting. *Fall (3) Mr. Elgers. Prerequisites: Bus. 201-202.*

The fundamentals of job order, process, and standard cost accounting and cost and profit analyses for decision-making purposes. Problems are used.

401. Advanced Accounting. *Fall (3) Mr. Smith. Prerequisites: Bus. 301-302, or permission of the instructor.*

A study of accounting for partnerships, consignments, installments, receivers' accounts and the use of actuarial science.

402. Specialized Accounting Problems. *Spring (3) Mr. McCormick. Prerequisites: Bus. 201-202, 301-302, and 401, or permission of the instructor.*

A study of consolidated statements, foreign exchange, estate and fund accounting, together with an analysis of a number of problems given on recent C.P.A. examinations.

404. Auditing. *Fall (3) Mr. McCormick. Prerequisites: Bus. 301-302.*

Auditing procedures through the application of auditing principles; standards and ethics; audit reports.

407. Seminar in Accounting. *Spring* (3) Mr. Smith. *Prerequisites:* *Bus. 301-302.*

Selected topics based upon controversial issues in accounting theory and practice.

409. Accounting Systems and Data Processing. *Fall* (3) Mr. Elgers. *Prerequisite:* *Bus. 301-302.*

The development, organization, design, analysis, and improvement of manual and automated business information systems. Emphasis is given to preparation of systems charts, flow charts, and computer programs.

410. Survey of Accounting. *Spring* (3) Mr. Dafashy.

A survey of the general field of accounting. Open to students of junior or higher standing not admitted to the School of Business Administration and not having taken *Bus. 201* or *202*.

Federal Taxation. (Marshall-Wythe School of Law). *Spring* (3) Mr. Smith.

Structure of the federal income, social security, estate and gift tax bases; reconciliation of tax and accounting concepts; tax credits and tax computations.

MANAGEMENT

ASSOCIATE PROFESSOR DAFASHY (*Head of the Department*).

DESCRIPTION OF COURSES

(Junior or higher standing is required before admission to any of the following courses.)

309. World Resources. *Fall and Spring* (3) Staff.

The forces of natural environment as they relate to world patterns of production and exchange with consideration of the roles played by selected commodities and other resources in world economic organization.

311. Fundamentals of Marketing. *Fall and Spring* (3) Mr. Gleysteen and Mr. Stanley. *Prerequisites:* *Econ. 201-202, or permission of the instructor.*

A study of the role of marketing in business and the economy. Emphasis is on the examination of functions, institutions, and policies.

312. Marketing Problems. *Spring* (3) Mr. King. *Prerequisites:* *Econ. 201-202 or permission of the instructor.*

An examination of marketing problems encountered at all levels of distribution. Cases are used to emphasize analysis and decision-making.

314. Sales Management. *Spring* (3) Staff. *Prerequisite:* *Bus. 311.*

An examination of the management of the sales effort in the business organization. Emphasis is given to sales organization, policies, and control. The case method is used to develop analysis of sales management functions.

315. Industrial Relations. *Fall and Spring* (3) Mr. Cole.

A course to provide understanding of the principles, policies, and practices used to develop a sound industrial relations program. Among the topics included are job analysis, the employment process, employee development, wage and salary administration, labor relations, and union negotiation.

316. Behavioral Science and the Business Organization. *Fall and Spring* (3) Mr. Cole.

A study of human behavior, development, and motivation in the business organization. Attention is given to behavioral science research in administration.

318. Quantitative Analysis for Business Decisions. *Fall and Spring* (3) Mr. Dafashy. *Prerequisite:* *Six credits in mathematics or permission of the instructor.*

A course which integrates quantitative decision methods and the team approach to research problems of interest to management. Attention is given to probability theory, linear programming and other quantitative approaches used in the analysis of business problems.

320. Advertising. *Spring* (3) Mr. Gleysteen. *Prerequisite:* *Econ. 201-202, or permission of the instructor.*

A study of the relationship of demand stimulation to business management. Analysis of cases will emphasize the management of advertising campaigns, expenditures, and the integration of advertising efforts as part of the total marketing concept.

323. Financial Management. *Fall and Spring* (3) Mr. O'Connell. *Prerequisites:* *Bus. 201-202.*

An introductory course covering current and long-term financing of the firm, capital budgeting, dividend policies, and business expansion.

327. Principles of Management. *Fall and Spring* (3) Mr. King, Mr. Marsh and Mr. Stanley. *Prerequisites: Econ. 201-202, or permission of the instructor.*

An introduction to the principles of management and their application to business. Emphasis is given to the development of a philosophy of management.

329. Management of Small Business. *Fall* (3) Staff.

A study of the special problems, analysis, and decision-making involved in the management of small business.

330. Production Management. *Spring* (3) Mr. Tarleton.

A course designed to familiarize the student with the production phase of business activity. Emphasis is on developing ability to use analytical methods in the design and operation of production systems.

331. Business Statistics. *Fall and Spring* (3) Mr. Dafashy, Mr. Traywick and Mr. Woodward. *Prerequisites: Six credits in mathematics or permission of the instructor.*

A study of the basic tools of statistical analysis used by the business administrator.

334. Business Model Analysis. *Fall and Spring* (3) Mr. Woodward. *Prerequisite: Six credits in mathematics or permission of the instructor.*

Business models and problem solving with IBM 360/50 computer assistance. Grounding in computer language and programming is presented first.

341. Business Law I. *Fall and Spring* (3) Mr. Jones. *Prerequisite: Junior or higher standing.*

Contracts, sales, negotiable instruments and agency with emphasis on the Uniform Commercial Code.

342. Business Law II. *Spring* (3) Mr. Jones. *Prerequisite: Bus. 341.*

Bailments and carriers, partnerships, corporations, unfair competition, bankruptcy, secured transactions, property, trusts, mortgages, and insurance.

416. Business Policy. *Fall and Spring* (3) Mr. King and Mr. Marsh. *Prerequisite: Senior standing in the School of Business Administration or permission of the instructor.*

A course which deals with the establishment of company-wide objectives and the subordinate plans and controls to accomplish them. This course integrates and builds upon the business administration core to develop decision-making ability at the policy-making level of administration.

430. Seminar in Business Research. *Fall and Spring* (3) Mr. Corey, Mr. King and Mr. Quittmeyer. *Prerequisite: Senior standing in the School of Business Administration or permission of the instructor.*

Independent research culminating in the preparation of a thesis on a topic of business interest.

MASTER OF BUSINESS ADMINISTRATION DEGREE

The Master of Business Administration degree usually requires four terms (20 courses) of full-time study. Part-time students without any waiver of core courses or transfer of credits may expect to complete requirements for the degree in a minimum of three and one-half calendar years. The curriculum has been designed to achieve the two-fold task of giving the graduate a well-rounded business education, and at the same time permitting him to specialize in his chosen areas. About one half of this program is devoted to acquiring a basic knowledge which The Faculty of Business Administration considers indispensable to anyone who pursues a fruitful business career. These basic studies, or core courses, fulfill half of the course requirement for the M.B.A. degree. For the remaining half a student may choose one or more areas of specialization and electives or 30 hours of elective courses on a broad basis.

Students admitted to and entering upon the M.B.A. degree program prior to the first semester of 1971-72 will follow the previous requirements for the M.B.A. degree.

Admission

Application forms for admission to graduate study should be requested from the office of the Associate Dean for Graduate Studies, School of Business Administration. Applications are accepted from qualified men and women for entrance in September, February, and

June. Closing dates for completion of applications are August 1, December 30, and May 15, respectively. Prospective students are advised that delayed application may result in postponement of enrollment to a subsequent term. The Admission Test for Graduate Study in Business is required of all applicants. However, when time does not permit, the applicant may take the Admission Test for Graduate Study in Business after admission to graduate study but in any case not later than the completion of the first semester or summer of graduate work, whichever comes first.

Please address correspondence concerning the M.B.A. degree to Associate Dean for Graduate Studies, School of Business Administration, College of William and Mary, Williamsburg, Virginia 23185.

Transfer of Graduate Credit

Six semester hours of graduate credit or the equivalent taken elsewhere may be transferred for graduate credit under this program, subject to the waiver provisions noted hereinafter, provided that equivalent graduate courses are listed in this program's curriculum and provided such hours of credit have been earned prior to admission to this School's M.B.A. program.

Other Graduate Credit

Six semester hours of graduate credit may be taken from other William and Mary graduate courses, with suitability for a student's program to be determined and approved by the Associate Dean for Graduate Studies, School of Business Administration.

Requirements for the Degree

1. The Associate Dean for Graduate Studies, School of Business Administration, will approve each student's program.

2. Sixty semester credit hours of approved graduate credit must, subject to waiver provisions, be completed for the degree with a minimum quality point average of 2.0. Normally, four graduate course grades below B or one graduate course grade of F will call for dismissal. A student may withdraw from a course without prejudice before it is half over but must complete it after that point or receive an F for dropping it, unless the drop is involuntary.

3. Each student must complete the following core courses in the program at William and Mary unless in the opinion of the School of Business Administration the student is to be waived on any or all of

them, except Bus. 570, because of previous substantial academic work in such courses at undergraduate or graduate levels:

	<i>Semester Hours</i>
Bus. 501—Quantitative Methods I	3 credits
Bus. 502—Quantitative Methods II	3 credits
Bus. 503—Quantitative Methods III	3 credits
Bus. 504—Quantitative Methods IV	3 credits
Bus. 505—Economic Analysis	3 credits
Bus. 506—Financial Analysis	3 credits
Bus. 507—Marketing Analysis	3 credits
Bus. 508—Production Analysis	3 credits
Bus. 509—Organizational Analysis	3 credits
Bus. 570—Policy Formulation and Action	3 credits
	—
	30 credits

(Bus. 570 is required of all students and is to be taken normally after all other core requirements have been met.)

In addition to the foregoing core courses taken or waived each student will take thirty semester credit hours of advanced work. At least 15 semester credit hours of this work must be taken outside of his field of specialization if a field of specialization is chosen.

Fields of Specialization

I. Quantitative Area:

- Bus. 512—Cost Administration
- Bus. 516—Management Science I
- Bus. 517—Management Science II

II. Economics Area:

- Bus. 521—Analysis of Business Conditions
- Bus. 522—Economic Dynamics
- Bus. 524—Trade Regulation

III. Finance Area:

- Bus. 512—Cost Administration
- Bus. 533—Investment Analysis
- Bus. 534—Management of Financial Institutions

IV. Marketing and Distribution Area:

- Bus. 541—Advertising Management
- Bus. 542—Procurement Management
- Bus. 546—Transportation Management

V. Organizational Area:

- Bus. 551—Business and the Urban Environment
- Bus. 554—Personnel Management
- Bus. 556—Management of Labor Relations

All other listed courses do not fall within any specialized field.

4. Although a thesis will not be required, the course Bus. 580-581 entitled Research Project in Graduate Business Administration will count as six semester hours of graduate credit for those who successfully complete it.

5. All requirements for the degree must be completed within a maximum period of seven calendar years after commencing graduate study for the M.B.A. degree at William and Mary.

DESCRIPTION OF COURSES

501. Quantitative Methods I. *Fall and Spring* (3) Mr. Elgers and Mr. Smith.

Concepts and principles of financial and administrative accounting essential to the interpretation and analysis of accounting information, including financial reports, budgeting, control, production and costing.

502. Quantitative Methods II. *Fall and Spring* (3) Mr. Elgers and Mr. Smith. *Prerequisite:* Bus. 501 or advanced standing.

Case studies emphasizing the development and utilization of accounting information in management planning and control.

503. Quantitative Methods III. *Fall and Spring* (3) Mr. Dafashy, Mr. Traywick and Mr. Woodward.

Application of statistical methods to management decision problems.

504. Quantitative Methods IV. *Fall and Spring* (3) Mr. Dafashy and Mr. Woodward. *Prerequisite:* Business 503 or the equivalent.

Mathematical formulation and analysis of problems of optional decision and control under certainty, covering theory of probability,

numerical analysis, optimization of deterministic systems, statistical inference and decision theory and the use of the computer in the analysis of complex systems.

505. Economic Analysis. *Fall and Spring* (3) Mr. McCormick, Mr. Sancetta and Mr. Tarleton.

Economic analysis applied in decision making. A study of the determinants of profits, with emphasis on price, volume, and costs. Specific topics include the uncertainty theory of profits, demand and cost analysis, business forecasting, break-even analysis, and price determination.

506. Financial Analysis. *Fall and Spring* (3) Mr. O'Connell.
Prerequisite: Business 501 or permission of the instructor.

An examination of the finance function in the firm with emphasis on the uses and sources of funds. Emphasis is placed on the identification and solution of financial problems.

507. Marketing Analysis. *Fall and Spring* (3) Mr. Gleysteen and Mr. King.

Examination of marketing from a managerial viewpoint; emphasis on evaluating marketing alternatives and in choosing from these alternatives.

508. Production Analysis. *Fall and Spring* (3) Mr. Tarleton.

A study of the design, operation, and control of production systems from a managerial standpoint, with emphasis on quantitative methods of analysis.

509. Organizational Analysis. *Fall and Spring* (3) Mr. Cole.

Orientation for the professional manager in understanding human behavior in the organization through cases, group research projects, and an individual analysis of behavior in small groups.

512. Cost Administration. *Fall or Spring* (3) Mr. Elgers. *Prerequisites: Business 502, 503, 504.*

Applications of quantitative techniques to administrative analysis of financial data; matrix approaches to profit planning, budgeting, and control; application of statistical techniques in cost analysis. Course includes substantial use of library computer programs.

516. Management Science I. *Fall* (3) Mr. Woodward. *Prerequisites: Business 503, 504.*

Application of the computer to the area of management science. Introduction is given to general systems theory: simulation, value analysis, inventory theory, probability, and Markov processes.

517. Management Science II. *Spring* (3) Mr. Woodward. *Prerequisite: Business 516.*

Basic queuing concepts and simulation; process generators; management planning models: matrix methods, industrial dynamics, and total systems simulations.

521. Analysis of Business Conditions. *Fall or Spring* (3) Mr. McCormick. *Prerequisite: Business 505.*

Economic analysis applied to business forecasting. An introduction is made to national income accounting, with emphasis on the Keynesian and post-Keynesian theories of income determination. Development of models is used in forecasting gross national product.

522. Economic Dynamics. *Fall or Spring* (3) Mr. Sancetta. *Prerequisite: Business 505.*

Process of industrial change and adjustment to change including anticipations and uncertainties; interplay between aggressive and defensive forms of competition.

524. Trade Regulation. *Fall or Spring* (3) Mr. Sancetta and Mr. Traywick. *Prerequisite: Business 505.*

Common law and statutory regulation of trade with emphasis on the federal anti-trust laws.

533. Investment Analysis. *Spring* (3) Mr. O'Connell. *Prerequisite: Business 506 or permission of the instructor.*

An examination of the nature of the securities markets and the characteristics of the various types of securities for institutional and personal investment.

534. Management of Financial Institutions. *Spring* (3) Mr. Sancetta. *Prerequisite: Business 501.*

General management problems and policies of commercial banks, savings and loan associations, investment companies and other financial intermediaries. The application of analytical techniques to the solution of financial problems is stressed.

537. Management of International Operations. *Spring* (3) Mr. Tarleton.

Organization and operation of business abroad; problems of communication and control with relation to aspects of doing business in foreign countries.

541. Advertising Management. *Spring and Summer* (3) Mr. Gleysteen and Mr. King.

Analysis of the managerial aspects of advertising including the examination of advertising alternatives.

542. Procurement Management. *Fall* (3) Mr. Jones.

Objectives and methods of managing procurement in an organization; value analysis; formal bidding and negotiation; federal government procedures.

544. Risk Management. *Spring* (3) Mr. Jones.

Objectives and methods of managing various types of risk that exist in the operation of an organization; risk transfer and reduction; self-insurance; insurance contracts.

546. Transportation Management. *Fall or Spring* (3) Mr. Stanley.

Application of management principles and techniques to problems in transportation.

551. Business and the Urban Environment. *Fall or Spring* (3) Mr. Cole. *Prerequisite: Business 509 or permission of the instructor.*

A study of factors in the urban environment which affect the business community, using cases, field study, role playing and other techniques. Factors include urban leadership, organization development, technological change, urban land development and minority groups.

554. Personnel Management. *Spring* (3) Mr. Warren.

Examination of the management of human resources; procurement of workers; development and evaluation including consideration of the role of the union.

556. Management of Labor Relations. *Spring* (3) Mr. Warren.

Systematic treatment of the nature of the relationships between unions and management, labor legislation, and the collective bargaining process. Readings, cases, and written reports are used.

570. Policy Formulation and Action. *Fall and Spring* (3) Mr. King and Mr. Stanley.

Policy decision-making at the top level, integrating the various functional areas of enterprise.

580-581. Research Project in Graduate Business Administration. *Fall and Spring* (6) Mr. Quittmeyer and Staff.

Work in research methodology and writing leading to the submission of an acceptable project.

SCHOOL OF EDUCATION

PROFESSORS BROOKS (*Dean of the School of Education*), CLEM, GALFO, HERRMANN, MCCARTHA, AND UNGER. ASSOCIATE PROFESSORS BULLOCK, CHESSER, GEOFFROY, GERBER, HANNY (*Director of Student Teaching*), JONES (*Associate Dean of the School of Education*), LAVACH, MAIDMENT, MILLS, O'SHELL, PRILLAMAN, AND SYKES. ASSISTANT PROFESSORS COWLES, FLANAGAN, GULESIAN, JENKINS, LAZANAS, AND RIES. LECTURERS DELAUNE AND F. NELSON.

UNDERGRADUATE CONCENTRATION

It is the philosophy of the School of Education that sound preparation for teaching must be based upon study in the Arts and Sciences and must include a carefully planned sequence of study in professional education supplemented by a supervised teaching experience.

PROCEDURES AND REQUIREMENTS FOR ADMISSION TO UNDERGRADUATE CONCENTRATION

Admission to Baccalaureate study at the College of William and Mary does not include admission to undergraduate concentration in the School of Education. Students who wish to concentrate in Education must meet the admissions requirements of the School of Education.

Application for admission to the School of Education is made during the second semester of the sophomore year. Applications are also accepted (1) from students who wish to change their concentrations from some other field to Education provided this is done prior to the second semester of the senior year, and (2) from transfer students who have been admitted to the College.

The criteria for admission to undergraduate concentration in the School of Education include the following:

- (1) An overall quality-point average of at least 1.0 (3.0 scale) must have been earned in work completed to date.*
- (2) The applicant must possess personal qualities which are necessary for successful teaching as indicated in a personal interview.

*In addition to the 1.0 overall quality-point average, juniors and seniors who wish to change their concentrations from some other field to Education must have at the time of application a 1.5 quality-point average in their present field of concentration.

(Information about the interview is given to the student after he has filed application.)

Application forms and information regarding admissions procedures may be obtained from the Office of the Dean of the School of Education.

UNDERGRADUATE PROGRAMS OF STUDY

Those students who are admitted to the School of Education concentrate in either elementary education or secondary education. Successful completion of either of these programs will insure the student of receiving the Collegiate Professional Certificate from the State Board of Education of the Commonwealth of Virginia.

Elementary Education

The suggested program listed below satisfies the distribution requirements of the College and leads to certification in elementary school teaching by the State of Virginia.

FRESHMAN-SOPHOMORE

	<i>Semester Credits</i>
English 101, 102, 201, 202	12
Foreign Language	6-14
Mathematics 105, 106	6
Social Science	12
Selected from:	
Economics 201, 202	Government 201, 202
History 101, 102	Sociology 201, 202
(Note: Since Economics is required for certification, it is suggested that the student choose Economics as partial fulfillment of the social science requirement.)	
Physical Education 101, 102, 201, 202	4
Science	8
Geology 101, 102	Physics 103, 104

(Note: Since elementary school science draws heavily from Geology and Physics, it is suggested that the student choose either or both of the courses suggested above.)

School of Education

JUNIOR-SENIOR

	<i>Semester Credits</i>
Education 301—Educational Psychology	3
Education 302—Human Growth and Development	3
Education 307—Teaching Mathematics in the Elementary School	3
Education 321—Children's Literature	3
Professional semester	15
Total	27

The following additional courses are required to complete certification requirements in the State of Virginia:

	<i>Semester Credits</i>
Fine Arts 331—Principles of Functional Design	3
Music 320—Music for Elementary School Teachers	}
or	
Music 321—Music in the Elementary School	
Physical Education 321E—Foundations of Health Education	3
History 201 or 202—American History	3
Total Additional Courses	12
Total	87-95

(Note: Electives shall be selected in cooperation with an advisor from the School of Education.)

Secondary Education

In addition to the courses listed below, the student preparing to teach in the secondary school should meet certain requirements in general education and in the area in which he is seeking a teaching endorsement. The student should become familiar with these requirements which may be obtained from the Office of the Dean of the School of Education.

JUNIOR-SENIOR

	<i>Semester Credits</i>
Education 301—Educational Psychology	3
Education 302—Human Growth and Development	3
Professional semester	12
Total	18
Major Teaching Field	24-42

(This will vary according to subject field concentration.)

Admission and Preregistration Procedures for the Professional Semester

A professional semester is required of students preparing to teach at the elementary or secondary levels. Included within this professional semester are the areas of methodology, evaluation of instruction, cultural foundations of education, and student teaching. Students wishing to enroll in this professional semester must be able to present a class schedule that devotes at least twelve semester hours to professional education and frees the student from 8 a.m. until 2 p.m. for student teaching. Since many student teachers must be placed in schools which are located some distance from the campus, the course taken beyond the professional semester should not be scheduled earlier than 3 p.m. During the professional semester students are limited to 15 semester hours for their total program. A student who wishes to enroll in the professional semester at either the elementary or secondary level must meet the following requirements:

1. Must have completed Education 301, Educational Psychology, and Education 302, Human Growth and Development, with grades in each course of not less than "C."
2. Must have the approval of his advisor in elementary education or the Director of Student Teaching at the secondary level.
3. Must have completed an approved field experience, or a substitute acceptable to his advisor in elementary education or the Director of Student Teaching. (The field experience must be completed before preregistration for the first semester of the senior year.)

Student teachers are placed in schools in the following school divisions: Williamsburg-James City County, York County, Newport News, and Hampton.

It is necessary that students preregister for student teaching so that sufficient time is provided for making necessary arrangements with the cooperating school divisions. Preregistration must be done individually with Dr. Robert Hanny (Secondary Education), or Professor Royce Chesser (Elementary Education). Deadlines for preregistration are as follows:

March 1 for subsequent Fall Semester

October 15 for subsequent Spring Semester

GRADUATE STUDY

Graduate study is available for those who have completed with merit an undergraduate degree program at an accredited institution. The School of Education awards the degrees of Master of Arts in Education and Master of Education in a variety of fields. In addition, the Certificate of Advanced Study (thirty semester hours beyond the Master's degree) and the Doctor of Education degree are offered in Educational Administration, Higher Educational Administration, and Counseling. For complete course descriptions and detailed information relating to the graduate program consult the *School of Education Catalog*, copies of which are available upon request from the Office of the Dean, School of Education.

DESCRIPTION OF COURSES

301. Educational Psychology. *Fall and Spring* (3) Mr. Lavach, Mr. Ries.

A course in which current theories of learning are analyzed emphasizing the basic factors of motivation, learning, retention, and transfer. Special emphasis is placed on educational implications of empirical and theoretical findings.

302. Human Growth and Development. *Fall and Spring* (3) Mr. Lavach, Mr. Ries.

A course in which selected theories and research findings dealing with progressive human growth and development from conception to senescence are examined. Major emphasis is placed on genetics, sensory-motor development, cognition, personality, perception, and emotion. Educational implications are explored.

303. Instructional Materials and Methods. *Fall and Spring* (3) Mr. Gulesian, Mr. Hanny, Mr. Jenkins. Part of the professional semester in secondary education.

A basic course in instructional methodology. Students plan, teach, and evaluate simulated lessons.

304. Teaching Reading in the Elementary School. *Fall and Spring* (3) Mr. Cowles. Part of the professional semester in elementary education.

A course in the fundamentals of instruction in reading. This course is concerned with the application of the principles of learning and

child development to the teaching of reading and the related language arts.

E305. Materials and Methods in the Elementary School. *Fall and Spring* (3) Mr. Cowles. Part of the professional semester in elementary education.

A continuation of 304 with emphasis upon the areas of school studies, science, and physical education.

S305. The Teaching of High School Latin. *Fall or Spring* (3) Mr. J. W. Jones.

Same as Latin 405

307. Teaching Mathematics in the Elementary School. *Fall and Spring* (3) Mr. Flanagan. *Prerequisites: Mathematics 105, 106.*

A course designed to supplement the prospective elementary school teacher's preparation in algebra and geometry with concentration mainly on effective pedagogy and materials for mathematics in grades K through 6.

321. Children's Literature. *Fall and Spring* (3) Mrs. Delaune.

A course including the study of children's reading interests, criteria for selection of materials, practice in evaluating materials, and a survey of the history and trends in publishing children's books.

400. Problems in Education. *Fall and Spring* (1-3) Staff.

A course for students who are capable of independent study under the direction of staff specialists. Students undertake study and research of educational problems of concern. One to three semester hours of credit depending upon the scope of the undertaking.

E401A. Supervised Teaching, Primary Grades. *Fall and Spring* (To be arranged) Staff.

A student teaching experience offered as part of the professional semester for prospective elementary school teachers at the primary level.

E401B. Supervised Teaching, Upper Elementary Grades. *Fall and Spring* (To be arranged) Staff.

A student teaching experience offered as part of the professional semester for prospective elementary school teachers at the upper elementary level.

S401. Supervised Teaching, Secondary Level. *Fall and Spring* (To be arranged) Staff.

A student teaching experience offered as part of the professional semester for prospective secondary school teachers.

404. Cultural Foundations of Education. *Fall and Spring* (3) Mr. Jones, Mr. Unger. Part of the professional semester in both elementary and secondary education.

A course dealing with the development of educational traditions, philosophical constructs underlying American practices of education, and the analysis of contemporary problems in light of this historical and philosophical background.

414. Educational Measurements and Evaluation. *Fall and Spring* (3) Mr. Jenkins, Mr. Ries. Part of the professional semester in secondary education.

A course dealing with (1) the identification and definition of instructional objectives in behavioral terms, (2) the construction and selection of both measuring and evaluative instruments to appraise these objectives, and (3) the interpretation in a meaningful way of the results obtained.

425. Survey of Exceptional Children. *Fall and Spring* (3) Mrs. Mills.

A study of all classifications of exceptionality including the gifted and the physically, mentally, emotionally, neurologically, and socially handicapped. The course is designed to acquaint teachers, administrators, counselors, and psychologists with the overall field of Special Education.

426. Developmental Reading. *Fall* (3) Miss Lazanas.

A course designed to help teachers understand the essentials of developmental reading instruction from the readiness period through the secondary level. Included is a study of word attack skills and of comprehension and reading in the content areas.

427D. Emotional Disorders of Children. *Fall and Spring* (3) Mr. Prillaman.

A study of the emotional bases for disordered behavior including physiological background, the dynamics of interaction with others, and the motives, drives, and conflicts which pattern behavior. Consideration is given to procedures for coping with behavioral disorders in schools.

436. The Improvement of Reading in the Junior and Senior High School. *Fall and Spring* (3) Miss Lazanas.

A course for teachers in junior and senior high schools who desire to improve their competence in the teaching of reading. Included are studies of the nature of reading problems and the most effective techniques for improving reading abilities.

459. Pre-Professional Experiences in Special Education. *Fall and Spring* (3) Mr. Prillaman and Mrs. Mills. *Prerequisite: Permission of instructor.*

An introductory course for students with limited experience in Special Education. The purpose of the course is to acquaint students with the role and function of public and private facilities serving the needs of exceptional individuals. Opportunities are provided for observation and participation in on-going programs.

TEACHER SCHOLARSHIPS, LOANS AND STUDENT EMPLOYMENT

Virginia Teacher's Scholarship

In addition to the financial assistance programs administered by the Director of Student Aid and Placement for the College, undergraduate students who are Virginia residents and who plan to concentrate in Education are eligible for Teacher Training Scholarships which are administered by the School of Education. These scholarships are made possible by an appropriation of the General Assembly of Virginia and are available to freshmen, sophomores, juniors, and seniors who plan to teach in the public schools of the Commonwealth. The scholarships are for \$350 per academic year and for proportionate amounts during the Summer Session. Inquiries should be addressed as follows:

The Director of Teacher Placement and Scholarships
School of Education
College of William and Mary
Williamsburg, Virginia 23185

Kappa Delta Pi Scholarship

The Alpha Xi Chapter of Kappa Delta Pi, national honor fraternity for teachers and students in Education, annually offers a \$100 scholarship to the student displaying combined scholarship and outstanding

professional qualities. Inquiries should be directed to the Dean of the School of Education.

TEACHER PLACEMENT

The School maintains a Bureau of Recommendations to assist its graduates who plan to teach or who are seeking changes in employment. No registration fee is charged, and all students enrolled in the School are urged to avail themselves of this service. If the students file complete records and cooperate with the Bureau, the faculty can be of assistance to those who go into teaching, not only at graduation, but also at later times.

STUDENT HONORS AND ACTIVITIES

Kappa Delta Pi

This honor society in Education was first organized in 1911, and Alpha Xi Chapter of the College of William and Mary was chartered in 1922. The purpose of Kappa Delta Pi is to encourage high professional, intellectual, and personal standards, and to recognize outstanding contributions to education. To this end the organization invites to membership persons who exhibit commendable personal qualities, worthy educational ideals, and sound scholarship. The organization endeavors to maintain a high degree of professional fellowship among its members and to quicken professional growth by honoring achievement in educational work. Both men and women are eligible for membership.

Student Education Association

This student organization, which complements the National Education Association and the Virginia Education Association, has been active in furthering professional competence and providing members with introductions to the national and state professional organizations. All prospective teachers are eligible for membership.

MARSHALL-WYTHE SCHOOL OF LAW¹

PROFESSORS WHYTE (*Dean*), DONALDSON (*Associate Dean*), FISCHER, JOLLS, PHELPS, POWELL AND SWINDLER. ASSOCIATE PROFESSORS LLEWELLYN AND STASON. ASSISTANT PROFESSORS BAHR, BROWN, COLLINS, SANTORO, SCOTT, WALCK AND WILLIAMSON. LECTURERS ANDERSON AND ZEPKIN. LAW LIBRARIAN JOHNSON.

HISTORY

The School of Law was originally established December 4, 1779, when, by resolution, the Board of Visitors created a professorship of Law and Police. Antedated by the Vinerian professorship at Oxford, established twenty-one years earlier and held by Sir William Blackstone, and by the chair at Trinity College, Dublin, the chair of law at the College of William and Mary thus became one of the earliest in the English-speaking world and the oldest in the United States.

The part played by Thomas Jefferson in placing law among the subjects taught at his *Alma Mater* is told briefly in his *Autobiography*.²

On the 1st of June, 1779, I was appointed (elected) Governor of the Commonwealth and retired from the legislature. Being elected also one of the Visitors of Wm. & Mary College, a self-electing body, I effected during my residence in Williamsburg that year, a change in the organization of that institution by abolishing the Grammar School, and the two professorships of Divinity & Oriental languages, and substituting a professorship of Law & Police, one of Anatomy, Medicine and Chemistry, and one of Modern Languages; and the charter confining us to six professorships, we added the law of Nature & Nations, & the Fine Arts to the Duties of the Moral professor, and Natural history to those of the professor of Mathematics and Natural philosophy.

The Board of Visitors elected as the first law professor George Wythe in whose office Jefferson had studied. A signer of the Declaration of Independence and styled by Jefferson the American Aristides, Wythe was a judge of the Virginia High Court of Chancery and one of the earliest judges to enunciate the doctrine of judicial review.

¹ See also Marshall-Wythe School of Law Bulletin, 1971-72.

² Ford's edition, I, 69-70.

The elevation of Wythe to the sole chancellorship of Virginia, ten years after the chair of law was established, necessitated his removal to Richmond and his resignation from the faculty. He was succeeded by St. George Tucker, whose edition of Blackstone is a legal classic and one of the first law books published in America. Among the last to hold the professorship at Williamsburg prior to 1861 was Lucian Minor, a member of another Virginia family intimately associated with the law.

Soon after its foundation, and probably from the very beginning, the law school of the College of William and Mary demanded an academic baccalaureate degree as a requirement for a law degree, the College statutes compiled in 1792 providing:

For the degree of Bachelor of Law, the student must have the requisites for Bachelor of Arts; he must moreover be well acquainted with Civil History, both Ancient and Modern and particularly with Municipal law and police.

In May, 1861, with the closing of the College, because of the exigencies of war, the law school ceased to function. When the College resumed operation, financial stringency resulted in the granting of leaves of absences to some of the faculty. Among these was the professor of Law. This leave of absence continued indefinitely. During the precarious years in the life of the institution following the Civil War the Law School remained largely dormant. Its revival, begun in 1920, was completed with the session of 1922-23.

The School of Law is registered by the State Department of Education of the University of the State of New York, is approved by the American Bar Association, and is a member of the Association of American Law Schools.

LIBRARY

The Library of the Marshall-Wythe School of Law contains approximately 50,000 volumes, and includes the National Reporter System, the American Digest System, all the Reports of the Supreme Court of Appeals of Virginia, all the United States Supreme Court Reports, and up-to-date statutes for all of the states. Also available are legal periodicals, session laws, state and municipal codes, digests, general and legal dictionaries and encyclopedias, texts, citators, and reports of many state supreme courts. The Law Library is administered by the Law Librarian, and during the regular session is open a total of 100 hours per week.

WILLIAM AND MARY LAW REVIEW

The *William and Mary Law Review* is published quarterly by the students of the School of Law with the cooperation of the faculty. Its primary objective is to provide an opportunity for student legal composition. The editor each year is a student selected by the faculty, and he is aided by an editorial board. The editor in 1970-71 is Haldane Robert Mayer.

PRE-LEGAL STUDIES

While no specific academic subjects, apart from the general requirements for the baccalaureate degree, are required for admission to the School of Law, students who expect to proceed to the law degree are urged to consult with pre-law advisers of their schools as early in their college careers as possible regarding the scope and distribution of their academic work.

ADVANCED CREDIT

With the discretion of the faculty of the School, credit may be allowed for subjects satisfactorily completed at accredited law schools, not to exceed the equivalent of 60 semester credits.

EXCLUSION BECAUSE OF POOR SCHOLARSHIP

Any student who has been admitted to candidacy for the Juris Doctor degree and who does not meet the academic standards established by the Law School Faculty and made available at registration will be permitted to continue his studies only with the consent of the Faculty. In addition regular class attendance is required. A law student may be compelled to withdraw from a course for irregular class attendance and flagrant violators are subject to suspension or expulsion from the School.

DEGREE REQUIREMENTS

THE JURIS DOCTOR DEGREE

Students holding an academic baccalaureate degree from an institution of approved standing, who have been in residence in the Law School for at least ninety weeks (or, in case advanced credit has been allowed have been in residence in this school at least during their last year), who have completed satisfactorily at least ninety semester credits

in law with a quality point average of 1.0 (3.0 scale) or better in *all* the law work undertaken, and who have demonstrated their ethical fitness, will receive the degree of Juris Doctor.

MISCELLANEOUS INFORMATION

Methods of Instruction. While each instructor has full liberty to adopt his method of teaching, the plan most generally used consists of the discussion of cases and legal problems. Students are encouraged from the beginning to make the fullest use of the law library.

Scholarships and Prizes. Matthew Gault Emery Law Scholarship, the Paul M. Shapiro Memorial Scholarship, the Lawyers Title Insurance Corporation Award, the Seidman & Seidman Tax Award, the William A. Hamilton Prize, and the William A. R. Goodwin Memorial Fund Scholarships. See Scholarships.

ADMISSION REQUIREMENTS

The following persons may be admitted to courses in Law:

Students holding an academic baccalaureate degree from an institution of approved standing who have the equivalent of a 1.4 average (3.0 scale) in all work taken and a satisfactory score on the Law School Admission Test given by the Educational Testing Service of Princeton, New Jersey 08540 may be considered for admission to the School of Law and take any subject or course of study approved by the Dean and Faculty of the School; provided, however, that students who are candidates for the degree of Juris Doctor shall follow the regular course of study.

Any person who is not in good standing, academically or otherwise, at any institution previously attended will not be eligible for consideration for admission.

Subject to the above provisions, registration is generally the same as for the College at large. Inquiries should be addressed to the Dean of The Law School.

COURSES OFFERED

(For course descriptions see Marshall-Wythe School of Law Bulletin).

FIRST YEAR

L01-02. Civil Procedure I, II. *Fall and Spring* (3,3) Mr. Anderson and Mr. Collins.

L03-04. Contracts I, II. *Fall and Spring* (3,3) Mr. Bahr and Mr. Brown.

L05-06. Property I, II. *Fall and Spring* (3,3) Mr. Scott and Mr. Williamson.

L07-08. Torts I, II. *Fall and Spring* (3,3) Mr. Walck, Mr. Bahr and Mr. Williamson.

L09. Legal Method and Writing. *Fall* (3) Mr. Bahr and Mr. Williamson.

L10. Criminal Law. *Spring* (4) Mr. Walck.

SECOND YEAR

L21-22. Business Organizations I, II. *Fall and Spring* (3,3) Mr. Brown and Mr. Phelps.

L23, 24-25. Commercial Law I, II, III. *Fall, Spring and Fall* (2,2,2) Mr. Scott and Mr. Jolls.

L26. Creditors Rights. *Spring* (3) Mr. Scott.

L27. Constitutional Law. *Fall* (4) Mr. Swindler.

L28. Trusts and Estates. *Spring* (4) Mr. Jolls.

L29. Evidence. *Fall* (3) Mr. Phelps.

L30. Federal Income Tax Law. *Spring* (3) Mr. Santoro.

L31. Legal Profession. *Fall* (2) Mr. Walck.

THIRD YEAR

L41. Administrative Law. *Fall* (3) Mr. Powell.

L42. Administrative Law Seminar. *Spring* (3) Mr. Collins.

L43. Labor Law. *Fall* (3) Mr. Whyte.

L44. Constitutional Rights and Duties. *Spring* (3) Mr. Brown.

L45. International Law. *Fall* (3) Mr. Stason.

L46. Criminal Justice Administration. *Spring* (3) Mr. Whyte.

L48. Legal History. *Spring* (3) Mr. Swindler.

L49. Government Regulation of Business. *Fall* (3) Mr. Stason.

- L50. Legislation.** *Spring* (3) Mr. Swindler.
- L51. Future Interests.** *Fall* (3) Mr. Llewellyn.
- L52. Municipal Corporations.** *Spring* (3) Mr. Powell.
- L53. Insurance.** *Fall* (3) Mr. Fischer.
- L54. Urban Land Use.** *Spring* (3) Mr. Anderson.
- L55. Regulation of Securities.** *Fall* (3) Mr. Jolls.
- L56. Admiralty Law.** *Spring* (3) Mr. Stason.
- L57. Equitable and Legal Remedies.** *Fall* (3) Mr. Collins.
- L58. Conflict of Laws.** *Spring* (3) Mr. Santoro.
- L59. Federal Jurisdiction and Procedure.** *Fall* (2) Mr. Anderson.
- L60. Family Law.** *Spring* (2) Mr. Phelps.
- L61. Law Review.** *Fall and Spring* (1,1) Mr. Scott and Mr. Swindler.
- L62. International Business Transactions.** *Spring* (3) Mr. Stason.
- L63. Legal Aid.** *Fall and Spring* (1,1) Mr. Zepkin.
- L64. Trial Advocacy.** *Spring* (2) Mr. Powell.
- L65. Legal Research.** *Fall and Spring* (1-3, 1-3) Mr. Whyte.
- L66. Moot Court.** *Fall and Spring* (1,1) Mr. Bahr and Mr. Williamson.
- L67. Trial and Appellate Practice.** *Fall* (2) Mr. Powell.
- L69. Virginia Procedure.** *Fall* (3) Mr. Phelps.
- 410. Legal Accounting.** *Spring* (3) Staff.

GRADUATE TAX COURSES

- L81. State and Local Taxation.** *Fall* (3) Mr. Donaldson.
- L82. Estate and Gift Taxation.** *Spring* (3) Mr. Fischer.
- L83. Advanced Income Tax.** *Fall* (3) Mr. Llewellyn.
- L84. Estate Planning.** *Spring* (2 or 3) Mr. Llewellyn.

L85-86. Tax Administration and Procedure I, II. *Fall and Spring* (2,2) Mr. Santoro.

L87. Taxation of Partnerships. *Fall* (2) Mr. Donaldson.

L88. Corporate Reorganizations. *Spring* (2 or 3) Mr. Donaldson.

L89. Business Planning. *Fall* (3) Mr. Santoro.

L90. Pension and Profit Sharing Plans. *Spring* (2) Mr. Fischer.

L91. Taxation of Trusts and Estates. *Fall* (2) Mr. Fischer.

THE FOLLOWING COURSES, ALTHOUGH TAUGHT BY ASSOCIATE MEMBERS OF THE LAW FACULTY, ARE DESIGNED FOR THE COLLEGE UNDERGRADUATE AND DO NOT CARRY LAW CREDIT.

401. Business Law I. *Fall* (3) Mr. G. C. Jones.

Contracts, sales, negotiable instruments and agency with emphasis on the Uniform Commercial Code.

402. Business Law II. *Spring* (3) Mr. G. C. Jones. *Prerequisite: Business Law I.*

Bailments and carriers, partnerships, corporations, unfair competition, bankruptcy, security transactions, property, trusts, mortgages, and insurance.

301. Introduction to Law. *Fall or Spring* (2) Mr. Zepkin.

The nature and functions of law in society as processes resolving civil and criminal disputes, maintaining historical continuity and doctrinal consistency, protecting voluntary agreements and resolving acute social conflicts. Illustrated by examples from criminal, tort, contract and labor law.

THE DEGREE OF MASTER OF LAW AND TAXATION

OBJECTIVES

The program leading to the Master of Law and Taxation degree is designed to fill a need for competently trained persons to serve the nation in any capacity in which a thorough comprehension of all phases of taxation is an essential requirement. In the present complex status of our tax law it requires joint consideration by a lawyer, an accountant, an economist, a political scientist, and an expert in business management in order to analyze properly all aspects of a tax matter. While the program does not presume to accomplish expertness in each

of these fields, it is intended to equip the student with fundamental groundwork in all and as much of advanced study in each as relates directly to the field of taxation. This recommended foundation in the related fields, coupled with specialized tax study, is designed to provide intensive training in tax law and ability to comprehend all of its diverse facets.

For complete course descriptions, details of the graduate program, and other information relating to the Marshall-Wythe School of Law write to the Dean of the Law School for the Bulletin.

THE SCHOOL OF MARINE SCIENCE

PROFESSORS HARGIS (*Dean of the School of Marine Science*), ANDREWS, BLACK, BREHMER, HARRISON, JOSEPH, VAN ENGEL, AND WOOD. ASSOCIATE PROFESSORS BENDER, BYRNE, DAVIS, HAEFNER, HAVEN, NICHOLS, NORCROSS, WASS, AND ZUBKOFF. ASSISTANT PROFESSORS BAILEY, CALDER, CHITTENDEN, DUPUY, FANG, GRANT, HYER, KAZAMA, KUO, LOESCH, MACINTYRE, MUNDAY, MUSICK, OTT, PERKINS, RUZECKI, SMITH, AND WEBB. INSTRUCTORS BOLUS, MERRINER, MONCURE, WARINNER, WOJCIK, AND ZWERNER.

ASSOCIATE FACULTY MEMBERS

BICK, KENNETH F., Ph.D.—Professor of Geology, College of William and Mary.

BYRD, MITCHELL A., Ph.D.—Chairman of Department and Professor of Biology, College of William and Mary.

ELLISON, ROBERT L., Ph.D.—Assistant Professor of Geology, University of Virginia.

HEWATT, WILLIS G., Ph.D.—Head of Department and Professor of Biology and Geology, Texas Christian University, Fort Worth, Texas.

HOPKINS, SEWELL H., Ph.D.—Professor of Biology, Texas A & M College, College Station, Texas.

HUMM, HAROLD J., Ph.D.—Director, Marine Science Institute, University of South Florida, St. Petersburg, Florida.

LIGUORI, VICTOR A., Ph.D.—Associate Professor of Sociology, College of William and Mary.

MANGUM, CHARLOTTE P., Ph.D.—Associate Professor of Biology, College of William and Mary.

MORRILL, JOHN B., Ph.D.—Associate Professor of Biology, New College, Sarasota, Florida.

NELSON, BRUCE W., Ph.D.—Dean of the College of Science and Arts, University of South Carolina, Columbia, South Carolina.

PEDIGO, ROBERT A., Ph.D.—Professor of Biology, St. Andrews College, Laurinburg, North Carolina.

TYREE, SHEPPARD Y., Ph.D.—Chairman of Department and Professor of Chemistry, College of William and Mary.

HISTORY

The School of Marine Science had its inception in the establishment of the Virginia Fisheries Laboratory by the Commonwealth in 1940 at the urging of Dr. Donald W. Davis, Professor of Biology, Dr. John Stuart Bryan, President of the College of William and Mary, and certain other academicians and members of the seafood industry. From 1940 until 1959 the academic program of the Laboratory was conducted as the Department of Biology.

In 1959 the program was established as the Department of Marine Science, and in 1961 the Board of Visitors established the marine training program as the School of Marine Science. The General Assembly in 1962 declared that the Virginia Fisheries Laboratory should be the Virginia Institute of Marine Science, an independent agency providing educational offering in Marine Science by affiliation with the College of William and Mary.

Laboratories were originally located on the main campus at Williamsburg and later in Yorktown. In 1950 the first permanent building was erected at Gloucester Point, across the York River from Yorktown, the present location of the School. The School awarded its first master's degree in 1943, and in 1964 inaugurated a doctoral program in Marine Science.

FACILITIES

Through the offerings of the School of Marine Science, a joint venture of the College and the Institute, an unusual opportunity is afforded students of Marine Science and Marine Fisheries Biology to take advanced undergraduate and graduate training at an active, year-round center of marine research.

Because its main campus is located at Gloucester Point on the York River, an important estuary with easy access to Chesapeake Bay and the nearby Atlantic, the Institute is admirably situated to conduct research and teaching in marine, estuarine, and freshwater biology and general hydrography. The secondary campus of the Eastern Shore Branch Laboratory at Wachapreague, Virginia, offers access to the embayments, salt marshes, and barrier beaches of Virginia's Eastern Shore.

The main laboratory, Maury Hall, constructed in 1950, is devoted primarily to administrative offices, a lecture and exhibit room and small display aquaria, and an extensive and growing reference library. Brooke Hall (1958) contains offices, and other laboratory facilities, and Davis Hall (1961) houses the Department of Microbiology-Pathology. Byrd Hall (1969) houses ecology-pollution, chemistry, physiology, and data processing. Three separate salt water buildings provide additional experimental facilities. The specially designed 55 foot, diesel-powered research vessel PATHFINDER is equipped with radio-telephone and modern biological and oceanographic instruments. The converted ferry, RV LANGLEY, serves as a floating laboratory for work in Chesapeake Bay. An auxiliary ketch, several inboard and outboard motorboats, and row boats are available.

PROGRAM

The program of the School of Marine Science is primarily intended for the advanced student who wishes to specialize in Marine Science or Oceanography. The degrees offered are the Master of Arts and Doctor of Philosophy in Marine Science. Majors in Biological Oceanography (Marine Biology), General Oceanography and Marine Fisheries Biology are available at both levels. Within these general areas, study in several specialties may be undertaken—for example, Physical Oceanography, Geological Oceanography, Marine Pollution Biology, etc. Though the program is chiefly for graduate students, certain courses are open to advanced undergraduates. At the present time the curriculum leading to the Master of Arts in Marine Science comprises a number of formal courses, a methods course, two problems courses, one seminar course, and a thesis course. The curriculum for the Doctor of Philosophy Degree consists of such formal courses in Marine Science and collateral fields as are necessary to the student's interests and program.

In summer qualified undergraduate students may take advanced training in Invertebrate Ecology, Marine Science, Physiology, and other subjects as scheduled. Special summer research courses in Marine Science for qualified science teachers and undergraduate biology majors are offered as funds are available. Financial assistance is generally available to qualified graduate and undergraduate students and to participating teachers.

As in most marine institutions, activities are accelerated in the summer. From four to six scientists are added to the research and teaching

staff. In addition to regular academic courses offered, the Institute has recently been associated with the National Science Foundation in two valuable summer training programs. Under one, college teachers are brought to Gloucester Point. In the other, ten students are brought to the Institute in the Undergraduate Research Participation Program. In both programs, enrollees participate in research projects. An additional ten to fifteen students are supported by the Summer Aide Program which is designed to acquaint them with marine research activities and to encourage their interests.

Because the *entire* organization is marine-oriented and all of the faculty is engaged in research, students have a better than usual opportunity to become intimately familiar with the field. This advantage is increased by the fact that the student's entire training program is carried out on the seacoast. The sea, itself, is a constant classroom companion.

PREPARATORY STUDIES

It is recommended that students who are seriously interested in Marine Science as a profession consult with the Dean of the School as early in their college careers as possible regarding an academic program to be followed. The student interested in Marine Biology (Biological Oceanography) or Marine Fisheries Biology should plan to take such subjects as Genetics, Comparative Anatomy of Vertebrates, Comparative Anatomy of Invertebrates, Histology, Embryology, Systematic Botany, Microbiology; several courses in Chemistry, *i.e.*, General, Qualitative and Quantitative, Organic and, if possible, Biochemistry; and General Physics. College mathematics through Trigonometry is very important. The calculus is recommended.

The prospective student of General Oceanography should have an undergraduate major in Physics, Meteorology, Chemistry, Mathematics or Geology. Students of the first three subjects should have taken Fluid Mechanics or Gas Dynamics or similar subjects and have Mathematics through the Calculus.

In all disciplines an overall grade average of at least C+, with B (2.0 in a 3 point system) in the major field is desirable.

ADMISSION REQUIREMENTS

Though the courses offered by the School are primarily for graduate students, advanced undergraduates (juniors and seniors) may par-

ticipate. For instance, Biology, Chemistry and Physics majors may enroll in suitable 400 level courses. An undergraduate major in Chemistry, Geology, Physics, or Psychology may work on a marine problem in his field of specialization. Consent of the Chairman of the student's major department is required to take problems courses in Marine Science. Summer courses offered by the School are available to all qualified students.

Graduate students will be admitted either to regular graduate or to unclassified graduate status. All applicants for admission to regular graduate status shall be cleared through the central admissions office in cooperation with the office of the Dean of Graduate Studies of the College at Williamsburg and be subject to the approval of the Committee on Graduate Studies of the School of Marine Science.

An applicant for admission to graduate study must have completed the requirements for a bachelor's degree in an institution of approved standing. Majors in the natural sciences are preferred. He must have achieved a minimum quality grade-point average of 1.5 (based on a 3 point system) or its equivalent. Applicants with higher grade-point averages will be given preference.

Applicants for admission to regular graduate status are required to take Graduate Record Examination. This must include the aptitude as well as the advanced portions of the test.

Inquiries should be addressed to the Dean of the School of Marine Science, Gloucester Point, Virginia.

DESCRIPTION OF COURSES

401. Introduction to Physical Oceanography. *Fall* (3) Mr. Ruzecki. *Prerequisites: Physics 101-102, Math 103.*

Physical properties of sea water, descriptive oceanography, air-sea interactions, heat budget, methods and measurements, dynamics of circulation, waves and tides. *Lectures and laboratory.*

402. Introduction to Chemical Oceanography. *Fall* (3) Mr. MacIntyre. *Prerequisite: Chemistry 101-102.*

Chemical properties and their distribution in the sea, nutrients, carbon dioxide system, methods of sea water analysis. *Lectures and laboratory.*

403. Introduction to Biological Oceanography. *Fall* (3) Staff.

Introduction to principles and concepts of marine ecology; characteristics of the oceans and estuaries as ecosystems. Occurrence and distribution of marine organisms in relation to hydrography. *Lectures, laboratory and field trips.*

404. Introduction to Geological Oceanography. *Fall* (3) Mr. Nichols.

Topography and sediments of the sea floor and coastal environments. Origin of the Geological processes. *Lectures and laboratory.*

†405. Problems in Marine Science. *Fall and Spring* (1-4) Staff.

Supervised projects selected to suit the needs of the advanced undergraduate student. Projects to be chosen in consultation with the head of the student's major department, the supervising professor and the Dean of the School of Marine Science. Acceptable topic outlines and terminal project reports are required.

†406. Introduction to Marine Science. *Summer session and extension* (5) Staff.

A general introduction to marine science including biological, chemical, geological and physical oceanography. *Lectures, laboratory and field trips, twenty-six hours per week for five weeks.*

***407. Biometry I.** *Spring* (3) Mr. Chittenden.

Application of statistical methods to analysis of biological and physical data. Binomial and chi-square distributions, normal distribution. Student-Fisher test, introduction to analysis of variance and regression analysis. *3 lecture hours.*

†410. Marine and Freshwater Invertebrates. *Summer session* (5) Staff.

Classification and identification, adaptation, ecology, life histories. Local marine, estuarine and freshwater forms emphasized. *Lectures, laboratory and field trips, twenty-six hours per week for five weeks.*

†412. Marine Botany. *Summer session.* (5) Staff.

A general introduction to the ecology and systematics of algae spermatophytes encountered in the marine environment. *Lectures, laboratory and field trips, twenty-six hours per week for five weeks.*

†419. Computer Applications in Marine Science. *As required* (1) Mr. Moncure and Mr. Wojcik.

Course designed primarily for students who require special Fortran programs for analysis of their research data. Following instruction in basics of programming language, each student will develop, with guidance, one or more computer programs pertinent to his or her thesis research. *One lecture hour.*

†420. **Workshop in Scientific Writing.** *Spring* (1) Mr. Grant.

Step-by-step analysis of the preparation of a journal article; structure and content of research and thesis proposals. *One lecture hour.*

†501. **Marine Science Seminar.** *Fall and Spring* (1-3) Staff.

One credit each semester; maximum three credits.

*502. **Advanced Biological Oceanography.** *As required* (3) Staff.

†503. **Advanced Problems in Marine Science.** *Fall and Spring* (1-4) Staff.

†504. **Biology of Selected Marine Invertebrates.** *As required* (3) Mr. Haefner. *Prerequisite: Marine Science 403 and undergraduate course in invertebrate zoology. Lecture and laboratory five hours.*

†505. **Radiobiology.** *As required* (4) Mr. Brehmer and Mr. Warinner.

Lectures and laboratory seven hours.

†507. **Marine Microbiology.** *Fall* (5) Mr. Kazama and Mr. Perkins. *Prerequisite: Biology 301 or equivalent.*

Three lecture and four laboratory hours.

†508. **Ichthyology.** *As required* (5) Mr. Musick.

Seven lecture, laboratory and field hours.

†510. **Pollution Biology.** *As required* (4) Mr. Bender.

Lecture and laboratory seven hours.

†511. **Geological Oceanography.** *As required* (3) Mr. Nichols. *Prerequisite: General or Physical Geology.*

Three lecture hours and cruise.

†512. **Parasites of Marine Organisms.** *As required* (5) Mr. Hargis and Mr. Zwerner.

Lecture and laboratory seven hours.

†513. **Marine Biogeography.** *As required* (3) Mr. Wass.

†514. **Littoral Processes.** *As required* (4) Staff. *Prerequisite: Marine Science 401 and consent of instructor.*

Lecture and field six hours.

†515. **Embryology of Marine Invertebrates.** *As required* (5) Staff. *Prerequisite: Biology 202 or equivalent.*

Lecture and laboratory seven hours.

†518. **Marine Fishery Science.** *As required* (4) Mr. Davis.

Lecture, laboratory and field six hours.

†519. **Biometry II.** *Fall* (3) Mr. Loesch and Mr. Chittenden. *Prerequisite: Marine Science 407 or equivalent.*

Three lecture hours.

†520. **Comparative Animal Physiology.** *Spring* (3) Miss Mangum and Staff. *Prerequisite: Acceptable course in physiology.*

Three lecture hours.

†521. **Chemical Oceanography.** *As required* (3) Mr. MacIntyre. *Prerequisites: Chemistry 201, 202; Math 201, 202, 203; Physics 101, 102.*

Three lecture hours; two laboratory hours; cruises.

†522. **Comparative Animal Physiology Laboratory.** *Spring* (2) Miss Mangum and Staff. *Prerequisite or corequisite: Marine Science 520.*

Four laboratory hours.

†523. **Topics in Applied Marine Science.** *Fall and Spring* (1-4) Staff.

*524. **Physiology of Marine Organisms.** *Second semester, alternate years* (5) Staff. *Prerequisites: Biology 101, 102; Chemistry 301, 302.*

Lecture, laboratory and field seven hours.

†525. **Hydromechanics.** *As required* (3) Mr. Fang. *Prerequisites: Math 302; Physics 101, 102 or equivalent.*

Lectures three hours.

†526. **Geophysical Fluid Dynamics.** *As required* (3) Mr. Hyer. *Prerequisites: Math 201, 202, 203, Marine Science 525 or equivalent.*

Lecture three hours.

†527. **Physical Oceanography of Coastal Waters.** *As required* (4) Mr. Ruzecki, Mr. Hyer, and Mr. Fang. *Prerequisites: Math 201, 202, 203, Marine Science 401.*

Lectures and laboratory four hours; three-day cruise required.

†528. **Micrometeorology and Hydrology of the Coastal Zone.** *As required* (3) Mr. Ruzecki and Mr. Fang. *Prerequisites: Marine Science 401 and 525 or consent of instructor.*

Lectures and laboratory four hours.

†529. **Mechanics of Sedimentation in Coastal Environments—I Mechanics.** *As required* (4) Mr. Byrne and Mr. Harrison. *Prerequisite: Marine Science 525 or consent of instructor.*

†530. **Mechanics of Sedimentation in Coastal Environments—II. Environmental Applications.** *As required* (4) Mr. Harrison and Mr. Byrne. *Prerequisite: Marine Science 529.*

Three lecture hours and field work.

†531. **Estuary and Shallow Water Hydrodynamics I.** *As required* (3) Mr. Fang and Mr. Hyer. *Prerequisite: Marine Science 401 and 525 or equivalent.*

Lectures three hours.

†532. **Estuary and Shallow Water Hydrodynamics II.** *As required* (3) Mr. Fang. *Prerequisite: Marine Science 531.*

Lecture three hours.

†533. **Oceanographic Remote Sensing.** *Fall* (3) Mr. Munday. *Prerequisites: Marine Science 401, 402, 403, 404 and Physics 202 or equivalents.*

Three lecture hours.

†540. **Population Dynamics.** *As required* (4) Mr. Van Engel. *Prerequisite: MS 407 or equivalent.*

Lecture and laboratory six hours.

†541. **Advanced Techniques in Statistical Analysis.** *As required*

(1-3) Staff. *Prerequisite: MS 519 and consent of instructor. Credit to be arranged, maximum three credits.*

†544. **Marine Mycology.** *Spring; odd numbered school years (4) Mr. Perkins, Mr. Kazama and Mr. Wood.*

Three lecture and two laboratory hours.

†545. **Marine Phytoplankton.** *Spring; even numbered school years (3) Mr. DuPuy. Prerequisites: Marine Science 401, 402, 403, 404.*

Lecture and laboratory five hours.

†546. **Marine Zooplankton.** *Spring; odd numbered school years (3) Mr. Grant.*

Lecture and laboratory five hours.

†547. **Marine Benthos.** *Fall (3) Mr. Wass. Prerequisite: Marine Science 410 or equivalent.*

Two lecture and two field hours.

†548. **Marine Protozoology.** *Spring; even numbered school years (4) Mr. Perkins.*

Three lecture and two laboratory hours.

†560. **Thesis.** *All semesters; hours to be arranged.*

†660. **Dissertation.** *All semesters; hours to be arranged.*

THE SCHOOL OF CONTINUING STUDIES

PROFESSORS HERRMANN (*Dean of the School of Continuing Studies*).
CLEM. ASSISTANT PROFESSOR LOONEY (*Associate Dean of the School of Continuing Studies*). INSTRUCTORS BIAS AND PURCELL.

THE SCHOOL OF CONTINUING STUDIES was established by the Board of Visitors in 1968 as an instrument for making the educational program of the College available to part-time students, especially the adult population of Tidewater Virginia. At present, Continuing Studies serves primarily an administrative function for the courses and programs of the other schools and faculties of the College. The major activities of the School are described below.

THE EVENING COLLEGE

The College initiated a program of evening courses in 1952, to enable residents of Tidewater communities and military personnel stationed in the area to earn residence credits which might be applied toward a degree at William and Mary or transferred to other institutions.

The program includes a selection of graduate and undergraduate courses from the regular curricula of the College. Instruction is provided primarily by members of the regular faculty. At present students may earn graduate degrees in Business and Education by attending evening classes.

All students or prospective students may obtain assistance with program planning and related problems by appointment with the Director. Call 229-3000, Extension 238, for an appointment.

THE EXTENSION DIVISION

The Extension Division was developed as a means of providing college level courses for Virginians particularly the residents of Tidewater unable to avail themselves of the educational opportunities on the campus. At present most of the courses taught in Extension are selected from the general catalogue and are offered for credit. Non-credit courses and seminars may be organized upon request.

With few exceptions, courses offered for credit meet weekly for sixteen sessions of three hours each and carry three semester hours of academic credit. Most of these classes meet during the evening hours.

A limited number of credits earned in Extension courses may be applied toward degrees at the College of William and Mary. *Students who have been admitted to candidacy for a degree should have their courses approved by their advisors.* These credits may also be transferred to another institution with the approval of the institution in question.

Extension courses, available in more than forty separate locations, are largely administered through the Coastal Area Extension Center, The Lower Peninsula Extension Center, and the Capital Area Extension Center. Courses are also available each semester at Fort Eustis, Fort Lee, Fort Story, Langley Air Force Base, the Oceana Naval Air Station, and the Little Creek Amphibious Base. Courses may be organized in other Tidewater communities by request.

Registration for Extension courses is processed at the first class meeting unless otherwise specified in the catalog. Prospective students who have not established eligibility may be registered provisionally pending presentation of evidence of good standing. Provisional registrations are automatically cancelled if such evidence is not presented before the course is completed.

THE SUMMER SESSION

The Summer Session is planned to provide courses for undergraduate and graduate students enrolled in liberal arts programs; to provide professional training in Business Administration, Education and Law; and, to furnish basic instruction in pre-professional programs, such as Forestry, Engineering, Medicine, Dentistry, Law, and the Ministry. Provision is made also for meeting the educational needs of high school graduates who wish to begin college work in the summer in order to accelerate the completion of their college program.

The Summer Session is an integral part of the educational program of the College of William and Mary and the opportunities for study are essentially the same as in the regular session. Courses are carefully selected from the regular session curriculum and are supplemented by programs specifically designed to meet the interests and needs of students who attend the Summer Session. Instruction is provided by regular members of the William and Mary faculty supplemented by specialists from other institutions.

The Summer Session consists of two terms of five weeks each. Students may enroll for either or both terms. Courses in Law are

taught on a nine-week schedule. Certain short courses for teachers are also available. Six semester hours constitutes a full course load for each five-week session.

ADMISSIONS POLICIES AND PROCEDURES

The essential requirement for the initial enrollment of a student in any program included in the School of Continuing Studies is presentation of evidence of graduation from an accredited secondary school or the equivalent as established by examination. Students with previous college experience must present evidence of good standing at the last such institution attended. If there appears to be a reasonable doubt of the ability of the individual to maintain a satisfactory level of performance at the college level, further evidence in terms of test results or transcripts of previous work may be requested. After eligibility has been established, the student remains in good standing unless notified to the contrary by the College.

Students who have established eligibility for enrollment in the School of Continuing Studies may enroll in any division thereof. Degree candidates and special students admitted to William and Mary through the Dean of Admissions are also automatically eligible. Undergraduate students who have requested admission only to programs administered by the School of Continuing Studies will be classified as non-matriculated students until such time as they are admitted to a degree program. Non-matriculated students who wish to earn undergraduate degrees at William and Mary must make application through the Dean of Admissions prior to the completion of 30 credits. Graduate students must comply with the regulations of the appropriate School or faculty. Admission to the School of Continuing Studies should not be construed as including admission to the day session or to any degree program of any other school or faculty of the College.

Prospective students who have never attended William and Mary should follow the application and registration procedures outlined in the current Evening College and Extension Division or the Summer Session Catalogues. The necessary forms are included. Since part-time students typically do not maintain a continuous enrollment, all students are requested to submit an application form for each semester or session of Evening College and Summer Session which they plan to attend in order to expedite the registration process.

TUITION, FEES AND EXPENSES

The basis for tuition for courses taken by part-time students in the School of Continuing Studies is the semester hour of credit. The tuition for all programs in Continuing Studies is \$18 per semester hour of undergraduate credit and \$22 per semester hour of graduate credit.

Graduate students who register for more than eight semester hours or undergraduate students who register for more than eleven semester hours in any combination of courses in Day School, Evening College and the Extension Division in any semester will be classified as full-time students and will be charged full tuition including the out-of-state fee. No non-resident fee will be charged for part-time or Summer Session students. Laboratory fees or charges for expendable materials may be assessed in some courses.

A registration fee of \$5.00 per student is charged in Summer Session only. Rent for dormitory rooms for summer students range from \$6.50 to \$14.00 per week. Meals are available in College dining rooms and are served a la carte.

CATALOGS AND INFORMATIONAL MATERIALS

Catalogs which include all course offerings and class schedules for Evening College and Extension are published each year in August, January and May. Copies may be obtained by contacting the Director of Evening College and Extension, College of William and Mary, Williamsburg, Virginia 23185.

A preliminary announcement of Summer Session, including a tentative list of course offerings, is published each January followed by a complete Summer Session catalogue in March which includes all necessary application forms. Special bulletins are available describing the Summer Band School, the Institute for Teachers of Science and other special programs. Copies may be obtained from the Director of Summer Session, College of William and Mary, Williamsburg, Virginia 23185.

THE VIRGINIA ASSOCIATED RESEARCH CAMPUS

THE VIRGINIA ASSOCIATED RESEARCH CAMPUS of the College of William and Mary is a graduate education and research facility located approximately twenty-five miles from the College's main campus in Williamsburg.

Advanced courses in Applied Science, Business Administration, Education, and Engineering are routinely offered at the Research Campus, all of which carry resident graduate credit. The program in Engineering is offered by Old Dominion University; all other programs by the College of William and Mary.

Inquiries and requests for bulletins and application forms should be directed as follows: for Applied Science to Director, Applied Science Program, College of William and Mary; for Engineering to Dean, School of Engineering, Old Dominion University; for Business Administration and Education to Dean, School of Continuing Studies, College of William and Mary.

Research programs in several disciplines are being conducted at the Research Campus. The College cooperates with institutions of higher education throughout Virginia in providing office and laboratory space, laboratory animal facilities, and electronic and machine shop assistance at the site for studies being conducted at the adjacent Space Radiation Effects Laboratory.

The Space Radiation Effects Laboratory (SREL) was constructed in 1965 by the National Aeronautics and Space Administration at a cost of \$15.5 million. It houses three particle accelerators, the largest of which is a 600 million electron volt synrocyclotron. SREL is administered through the Research Campus by the College of William and Mary under contract with NASA and is used by scientists at universities throughout the nation. Research being conducted at the site includes nuclear physics, nuclear chemistry, radiation biology, and radiation effects on materials.

PRE-PROFESSIONAL PROGRAMS

Dentistry, Engineering, Forestry, Medical Technology, Medicine, and Veterinary Medicine

Students may follow programs at William and Mary within a liberal arts framework which will prepare them for study in Dentistry, Engineering, Forestry, Medical Technology, Medicine, and Veterinary Medicine. The pre-professional programs in Engineering and Forestry are prescribed because of cooperative programs with other institutions. Students who are interested in other pre-professional programs in Dentistry, Medical Technology, Medicine, and Veterinary Medicine, should plan their programs in consultation with their advisor.

PREMEDICAL AND PREDENTAL PROGRAMS

There are no specific premedical or predental programs. Students preparing themselves for admission to medical or dental school may choose to concentrate in any department. Although medical schools in general have no preference as to major field of undergraduate study, they do believe that the student should pursue a coherent program with some depth.

A liberal education is appropriate to preparation for a career in medicine. The physician should be able to use and to understand both the written and spoken language. Moreover, those who have cultivated an interest in philosophy, history, and the arts can enrich their own lives and, in so doing, may become more effective members of their communities.

For the country at large most medical school graduates now earn their baccalaureate degree; some of these students spend only three years in the liberal arts college and receive the college degree after completing the first year in medical school or, as in the case of William and Mary, upon the completion of the medical course. Certain schools now have combined liberal arts-medical programs wherein the students spend only two years in the liberal arts college.

The foundation of medicine is the natural sciences. All medical schools include in their admission requirements four laboratory science courses: biology, inorganic chemistry, organic chemistry and general

physics. The calculus is rapidly assuming the same importance. At William and Mary, the above courses are Biology 101-102, Chemistry 101-102, Chemistry 201-202, Physics 101-102, Physics 103-104 and Mathematics 201-202. Science courses in addition to these minimal requirements are required by some medical schools and viewed with favor by many others. In any case, the student's choice of courses should be balanced and should reflect his overall intellectual development.

The premedical advisors at William and Mary encourage students to complete four years before going to medical school, for a liberal arts program reaches its full meaning in the final years; to terminate such a program after three years is to lose its unique significance. Future success in medical school and in medical practice depends in great measure on the competence and attitudes developed during the liberal arts program.

Since medical schools begin to reach decisions on applicants for admission early in the senior year on the basis of records established at that time, it is advantageous that the minimal required science courses be completed in the first three years. Every premedical student is encouraged to seek academic guidance early in his career through scheduled consultations with a premedical advisor.

Preparation for Engineering

Students may prepare in this College for entrance to the Junior class of any standard engineering school. In making this preparation students will find it necessary to make an early selection of the branch of engineering and the engineering school which they wish to enter in order that their courses may be chosen in accordance with the requirements of their engineering school. It is strongly urged that students seek advice from the Committee on Pre-Engineering Students in adapting their courses to fit the particular branch of engineering they propose to follow.

The course outlined below will be found to meet the general requirements for all branches of engineering.

	<i>Semester Credits</i>
English	6
Mathematics	15 (or 12)
Engineering Drawing and Descriptive Geometry	3 to 6
Physics	8
Chemistry	8

For special branches of engineering the following additional courses are recommended: two years of Physics for Nuclear, Electrical and Mechanical Engineering; an additional year of Chemistry for Chemical, Mining, and Sanitary Engineering; a year of Biology for Sanitary Engineering.

The course for engineering students may be fitted into the regular program leading to a B.S. degree and this procedure will afford the engineering student a broad training for this professional work. The completion of the program ordinarily requires four years, but engineering students who complete three years in residence and fulfill degree requirements, except the completion of a field of concentration, with a minimum quality point average of 1.2, will, upon application, be granted the B.S. degree of this College on graduation from an approved engineering school.

PROGRAM IN COOPERATION WITH LEADING
ENGINEERING COLLEGES

The College has combined plan agreements with the School of Engineering, Columbia University, the School of Engineering Science, The Johns Hopkins University, and the School of Engineering, Rensselaer Polytechnic Institute. Under these arrangements, and by properly planning his studies to include the basic sciences and humanities, a student of high standing may pursue a combined five-year program in which the first three years are spent at the College and the last two at the institution of his choice, leading to the bachelor's degree from each institution.

Other arrangements lead to a bachelor's degree from William and Mary and a master's degree from an engineering school after a total of five or six years of study.

The following is the program of courses to be taken at the College of William and Mary.

FIRST YEAR		
	1st Sem.	2nd Sem.
Composition and Literature (Eng. 101-2)	3	3
Freshman Mathematics (Usually Math 201-2)	3	3
Elementary General Chemistry (Chem. 101-2)	4	4
General Physics (Phy. 101-2)	4	4
Physical Education (Required Phys. Ed.)	1	1
Total Semester Credits	15	15

SECOND YEAR

	1st Sem.	2nd Sem.
English Literature (Eng. 201, 2)	3	3
Calculus (Usually Math. 203, 302)	3	3
Foreign Language (French or German)	4	4
European History (Hist. 101, 2), Government (Govt. 201, 2) or Sociology (Soc. 201, 2)	3	3
Intermediate Physics (Phys. 201-2)	3	3
Intermediate Experimental Physics (Phys. 251-2)	1	1
Physical Education (Required Phys. Ed.)	1	1
	—	—
Total Semester Credits	18	18

THIRD YEAR¹

Selections from the following:

Foreign Language	3	3
Mathematics 311-312	3	3
Engineering Drawing and Descriptive Geometry (Engineering Graphics 201-2)	3	3
Experimental Physics (Phys. 351-2)	1	1
Classical Mechanics (Phys. 301-2)	3	3
or Analytical Chemistry (Chem. 303-4)	4	4
Thermodynamics (Phys. 312)	3	—
Introductory Quantum Physics (Phys. 311)	—	3
Principles of Economics (Econ. 201, 2)	3	3

Students preparing for special programs not mentioned above should consult with the Chairman of the Committee on Pre-Engineering Students.

¹ Students preparing for Chemical Engineering or Metallurgy should elect Analytical Chemistry and omit Mechanics. For Civil, Mechanical, Nuclear and Electrical Engineering programs, Mechanics should be elected and Analytical Chemistry omitted. Those who elect Analytical Chemistry may find it desirable to include it in the second year program, postponing European History to the third year.

Preparation for Forestry

Students may prepare at William and Mary for entrance into forestry schools at other institutions. Here they obtain a sound education in the humanities and other liberal arts in addition to the sciences basic to forestry.

The College offers a special program in cooperation with the School of Forestry of Duke University. Upon completion of a five-year co-ordinated course of study the student will have earned the Bachelor of Science degree from William and Mary and the professional degree of Master of Forestry from Duke University. The student devotes the last two years of his program to the professional forestry curriculum of his choice at Duke, where forestry courses are open only to seniors and to graduate students.

Candidates for the forestry program should indicate to the dean of Admissions of the College of William and Mary that they wish to apply for the Liberal Arts-Forestry curriculum. Admission to the College is granted under the same conditions as for other curricula. At the end of the first semester of the third year the College will recommend qualified students for admission to the Duke School of Forestry. Each recommendation will be accompanied by the student's application for admission and by a transcript of his academic record at William and Mary. No application need be made to the School of Forestry prior to this time.

Pre-Forestry Curriculum at William and Mary.

FIRST YEAR

	<i>1st Sem.</i>	<i>2nd Sem.</i>
Eng. 101-102	3	3
Classical or Modern Foreign Language	4	4
Biol. 101, 102	4	4
Math. 103, 201 or 201, 202	3	3
Phys. Ed. 101, 102	1	1
Electives	1-2	1-2
	<hr/> 16-17	<hr/> 16-17

SECOND YEAR

	<i>1st Sem.</i>	<i>2nd Sem.</i>
Eng. 201, 202	3	3
Classical or Modern Foreign Language	3	3
Chem. 101-102	4	4
Biol. 401; Biol. 206 or Biol. 412	4	4
Electives	1-3	1-3
	<hr/> 15-17	<hr/> 15-17

THIRD YEAR

Econ. 201, 202	3	3
Govt. 201, 202	3	3
Biol. 301 or Elective Biology	4	—
Biol. 419	—	4
Physics 101-102	4	4
Electives	1-3	1-3
	<hr/> 15-17	<hr/> 15-17

V. ORGANIZATIONS OF THE COLLEGE

INSTITUTE OF EARLY AMERICAN HISTORY AND CULTURE

THE INSTITUTE of Early American History and Culture was established in 1943 by the union of certain historical research and publication activities of the College of William and Mary and The Colonial Williamsburg Foundation. The College contributed *The William and Mary Quarterly*, a historical periodical published since 1892, and the use of the rich resources of its library, while Colonial Williamsburg contributed the Williamsburg Restoration Historical Studies, its program of research fellowships, and the use of its important manuscript collections. The board of editors of the *Quarterly* and the Restoration's advisory council of historians were merged to form the first Council of the Institute, an advisory board drawn from the nation at large. The membership of the present Council is given below.

By promoting the study of early American history the Institute aims, in the words of its Constitution, "to preserve and advance understanding of the enduring contributions of the colonists and the founders of the Republic." It does so by the publication of significant books and articles in the field of early American history from the beginnings through the Jeffersonian era, by teaching and consultation, and by the acquisition of research materials on microfilm. Its collection of early American newspapers on film is one of the largest extant. Its publication of the *Virginia Gazette Index* (1950) provides the only comprehensive index to a series of important colonial newspapers so far made available to researchers.

The Institute cooperates in many ways and to the fullest possible extent with historical activities of both the College and Colonial Williamsburg, but it is an autonomous organization with a separate and distinct program which is national rather than local. Its books and the articles appearing in *The William and Mary Quarterly* are directed to the widest possible audience. The director of the Institute is Stephen G. Kurtz. On this staff are: James H. Hutson, editor of publications in charge of the book publication program, and Joy Dickinson, assistant editor; Thad W. Tate, editor of *The William and Mary Quarterly*; Donna Sheppard, assistant editor of the *Quarterly*; Sung Bok Kim and Norman S. Fiering, fellows; John E. Selby, book review editor of the *Quarterly*. Mr. Kurtz and Herbert A. Johnson

are co-editors, and Nancy Harris is assistant editor of *The Papers of John Marshall*. Messrs. Kurtz, Fiering, Johnson, Kim, Selby, and Tate are members of the Department of History at the College.

The Papers of John Marshall, under a grant from the National Historical Publications Commission and an appropriation from the General Assembly of Virginia, supplemented by funds from private sources, will be a definitive edition of the works of the Chief Justice.

The offices of the Institute and of *The William and Mary Quarterly* are in the Earl Gregg Swem Library on the College campus. The postal address is Box 220, Williamsburg, Virginia 23185.

The sponsors of the Institute are Davis Y. Paschall, President of the College of William and Mary, and Carlisle H. Humelsine, President of The Colonial Williamsburg Foundation.

INSTITUTE OF EARLY AMERICAN HISTORY AND
CULTURE MEMBERSHIP AND COMMITTEES
OF THE COUNCIL
1970-71

Term Expires May 1971

GEORGE A. BILLIAS, *Clark University*
LAWRENCE A. HARPER, *University of California, Berkeley*
BRADFORD PERKINS, *University of Michigan*
EDWARD M. RILEY, *Colonial Williamsburg Foundation* (vice chairman)
CLARENCE L. VER STEEG, *Northwestern University* (chairman)

Term Expires May 1972

RICHARD M. BROWN, *College of William and Mary*
LYMAN H. BUTTERFIELD, *The Adams Papers*
JACK P. GREENE, *The Johns Hopkins University* (secretary)
EDMUND S. MORGAN, *Yale University*
LAWRENCE W. TOWNER, *The Newberry Library*

Term Expires May 1973

C. WALLER BARRETT, *Charlottesville, Virginia*
H. G. JONES, *North Carolina Department of Archives and History*
LEONARD W. LEVY, *Claremont Graduate School*
PIERS G. MACKESY, *Pembroke College, Oxford*
JAMES MORTON SMITH, *State Historical Society of Wisconsin*

Ex Officio

DAVIS Y. PASCHALL, *College of William and Mary*

CARLISLE H. HUMELSINE, *Colonial Williamsburg Foundation*

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LEVY, PERKINS, RILEY, ROSSITER, SMITH

William and Mary Quarterly Board: MESSRS. BILLIAS, BUTTERFIELD,
HARPER, JONES, MACKESY, MORGAN, TOWNER, VER STEEG

THE MARSHALL-WYTHE INSTITUTE FOR RESEARCH IN THE SOCIAL SCIENCES

THE MARSHALL-WYTHE Institute for Research in the Social Sciences consists of representatives from the Departments of Economics, Government, History, Sociology, Anthropology, the School of Business Administration, and the Marshall-Wythe School of Law. The Director of the Institute is the John Marshall Professor of Government. In 1926, through the generosity of James Goold Cutler, Esq., Rochester, New York, a fund of approximately \$100,000 was established, the income to be applied toward the salary of the John Marshall Professor of Government and Citizenship and for other purposes.

The Institute conducts a symposium, known as the Marshall-Wythe Symposium during the second semester. One semester credit is given in this course, and a student may, in successive terms, receive a maximum of two credits. It will also arrange lectures on current topics relating to the social sciences, and develop research among the social science departments.

THE SOCIETY OF THE ALUMNI

THE SOCIETY of the Alumni of the College of William and Mary in Virginia was founded in 1842 and incorporated on March 17, 1923. Its purpose is to organize the alumni of the College of William and Mary in one general body, in order to keep alive the memories of college life and promote the welfare of the College. Any graduate or any alumnus who has completed one regular college semester at the College in Williamsburg and has received honorable dismissal is eligible for membership in the Society. Contributors to The William and Mary Fund are accorded all membership privileges. *The Alumni Gazette*, the official publication of the Society, is sent to all living alumni.

The officers of the Society are Mary Permelia Pauly (Chinnis), '46, President; John Evans Hocutt, '35, Vice President; Allen Clarence Tanner, '46, Secretary-Treasurer; James Sands Kelly, '51, Executive Secretary; Gordon Cheesman Vliet, '54, is Director of Alumni Affairs.

The members of the Board of Directors of the Society are:

To December 1971—Robert A. Duncan, '24, Williamsburg, Virginia; Donald G. Griffin, '42, Norfolk, Virginia; Jane Harden (Hanson), '42, Potomac, Maryland; John Evans Hocutt, '35, Newark, Delaware.

To December 1972—Mary Permelia Pauly (Chinnis), '46, Alexandria, Virginia; C. Randolph Davis, '50, Suffolk, Virginia; Betty Lee Hicks (Wagner), '51, Richmond, Virginia; Howard Hopkins Hyle, '48, Atlanta, Georgia; Hugh Smith Haynie, '50, Louisville, Kentucky.

To December 1973—Guy Wilson Daugherty, '34, Rochester, Minnesota; Chester F. Giermak, '50, Erie, Pennsylvania; Paul Kormick Lapolla, '41, La Jolla, California; Marjorie Jean Retzke (Gibbs), '44, Somerville, New Jersey; Allen Clarence Tanner, '46, Newport News, Virginia.

The members of the Alumni Board of Trustees of the Alumni Endowment of the College of William and Mary are: Jay Wilfred Lambert, '27, Williamsburg, Virginia; Robert A. Duncan, '24, Williamsburg, Virginia; Edward Nelson Islin, '25, Newport News, Virginia; Robert S. Hornsby, '41, Williamsburg, Virginia; ex-officio—the President of the Society of the Alumni.

The Alumni Office is located in Ewell Hall.

THE WILLIAM AND MARY ENDOWMENT FUND

THE ENDOWMENT ASSOCIATION

The affairs of the Association, a private corporation, are conducted by a self-perpetuating elected Board of from nine to fifteen members. The present membership of the Board is as follows:

DAVIS Y. PASCHALL, '32, Williamsburg, *President*
ALVIN DUKE CHANDLER, '22x, Virginia Beach, *Vice-President*
ROBERT T. ARMISTEAD, '36, Williamsburg
J. D. CARNEAL, JR., '20, Richmond
ROY R. CHARLES, '32, Norfolk
T. C. CLARKE, '22, Norfolk
W. BROOKS GEORGE, '32, Richmond
MILLS E. GODWIN, JR., '36, Suffolk, Virginia
ARTHUR B. HANSON, '39, Washington, D. C.
HENRY C. HOFHEIMER II, Norfolk
HOWARD H. HYLE, '48, Atlanta, Georgia
JOHN R. LEE JOHNSON, JR., '28, Wilmington, Delaware
CARTER O. LOWANCE, Williamsburg, Virginia
OTTO LOWE, JR., '55, Potomac, Maryland
RAYMOND A. MASON, '59, Potomac, Maryland
WALTER G. MASON, Lynchburg
BLAKE T. NEWTON, JR., '35, New York
W. L. PERSON, '24, Williamsburg
J. C. PHILLIPS, '24, Harrisburg, Pennsylvania
JOHN GARLAND POLLARD, JR., '23, Lancaster
A. ADDISON ROBERTS, '35, Philadelphia
JAMES M. ROBERTSON, '29, Norfolk
JAMES ASA SHIELD, '24, Manakin, Sabot
THOMAS THOMPSON, '49, Short Hills, New Jersey
H. HUDNALL WARE, JR.,* '22, Richmond
TRUMAN C. WELLING, '30, Wilmington, Delaware
WALTER J. ZABLE, '37, San Diego
J. EDWARD ZOLLINGER, '27, Ft. Lauderdale, Florida

VERNON L. NUNN, *Secretary*
FLOYD WHITAKER, *Treasurer*

* Trustee Emeritus

The income from the Association's funds is used to support scholarships, Chancellor professorships, and other general College purposes. The objectives of the Endowment Association are contained in the charter and by-laws, copies of which may be obtained on request.

THE FRIENDS OF THE COLLEGE

Annual memberships of this organization are \$150; life memberships, \$1,500. The income of the Friends is spent currently at the discretion of the President of the College for the support of concerts, lectures, the Musical Records Collection, the War Memorial Book Shelf, undergraduate activities, scholarship aid, and emergency scholarship assistance to worthy students.

VI. MISCELLANEOUS INFORMATION

GIFTS AND BEQUESTS

Although the College of William and Mary derives a certain amount of its financial support from appropriations from public funds by the General Assembly of the Commonwealth of Virginia, the remainder of the money required for its operation—and particularly for the qualitative development of its research and educational services—must come from endowment funds, gifts, bequests, and other types of support from a variety of nontax or nonpublic sources. In a period of steadily increasing demands for additional or enlarged services of various types, all colleges—those which are entirely privately supported, those which are entirely state-supported, and those which, like the College of William and Mary, rely on both public and private funds—must look to their friends, alumni, and others interested in the continued growth of higher learning, for the economic assistance necessary to support their educational program.

This economic assistance may take the form of single or continuing grants from educational foundations, or from private corporations, or from individuals. The individual gift may be either a lifetime or a testamentary gift or bequest. It may be a general gift, to be used for such purposes as the College may itself determine; or it may be a specific gift for a purpose desired by the donor or proposed by the College. It may be a gift large enough to cover the entire cost of establishing and maintaining a particular structure or activity, or it may be an integral part of a fund representing several gifts whose aggregate will suffice to meet the necessary cost of the total project.

A wide variety of essential activities of the College may be aided fundamentally by such gifts and bequests. Scholarships and fellowships, with their attendant supplemental grants to the College to cover the extra costs incurred in accepting such scholarship and fellowship holders as students, are one of the most general categories of such private support. Similarly, grants in aid of staff salaries, including the creation of endowed chairs and of distinguished professorships, are increasingly needed by institutions such as the College of William and Mary, to meet the competition of private industry and other educational agencies which are continually bidding for the services of such trained personnel. Research grants, funds to finance the purchase of rare manuscripts and related scholarly materials, exchange professorships and scholarships to permit students and faculty from the College

to study abroad and to bring to this campus their counterparts from foreign universities, are other continually needed contributions. Finally, the College has occasionally benefited from gifts for a variety of major capital projects (e.g., building) for which future gifts and bequests will be welcomed.

Gifts. Lifetime gifts, or gifts by corporations, individuals, or foundations should be made to The Endowment Association of the College of William and Mary in Virginia, Inc.

Any kind of property, real or personal, may be the subject of a gift and only such form as is required to pass title is necessary. If the gift consists of real property, the title will be passed by deed; if it consists of cash or unregistered bonds, the gift is consummated by delivery of the property; or if stocks, by delivery of properly endorsed stock certificates. Unless restricted, the use of gifts is at the discretion of the Board of The Endowment Association. Usually the proceeds, conservatively invested, are added to the permanent endowment of the College of William and Mary. The donor may, however, restrict the use of any gift and designate definitely the purposes for which it shall be used. In such cases, the transfer of property would be accomplished by a letter or other documents describing in detail the purposes for which the proceeds of the gift are to be used and when accepted by The Endowment Association the term or conditions set out therein become binding upon it.

Bequests. Testamentary gifts, or bequests, should be made to The Endowment Association of the College of William and Mary in Virginia, Inc. Bequests may be made by setting their provisions forth in a will; or, if a will has already been drawn, they may be expressed in a codicil to the will. The following forms for wills or codicils are suggested:

GENERAL

I (*give*, if personal property; *devise*, if real property) and bequeath to The Endowment Association of the College of William and Mary in Virginia, Inc., a private corporation existing under the laws of the Commonwealth of Virginia and located in the City of Williamsburg, Virginia, and to its successors forever, the sum of dollars (or otherwise describe the gifts) for the general purposes and uses of the College of William and Mary in Virginia at the discretion of the Endowment Association of the College of William and Mary in Virginia, Inc.

SPECIFIC

I (*give*, if personal property; *devise*, if real property) and bequeath to The Endowment Association of the College of William and Mary in Virginia, Inc., a private corporation existing under the law of the Commonwealth of Virginia and located in the City of Williamsburg, Virginia, and to its successors forever, the sum of..... dollars (or otherwise describe the gift) and direct that the principal thereof and/or income therefrom shall be used for the following purposes, viz. (here describe the use desired).

CODICIL

Having hereinbefore made by last Will and Testament dated, and being of sound mind, I hereby make, publish, and declare the following codicil thereto; (here insert clause in same form as if it had been included in the body of the Will). Except as hereinbefore changed, I here ratify, confirm and republish my said last Will and Testament.

Should you or your attorney wish additional information, please contact the Office of the President of the College of William and Mary and an informational booklet will be mailed to you.

SCHOLARSHIPS, LOAN FUNDS, AND AWARDS

MERIT SCHOLARSHIPS

<i>Award</i>	<i>Donor or Source</i>
HENRY EASTMAN BENNETT	Loren Eastman Bennett, Mrs. Henry E. Bennett, and Mrs. William George Guy
GEORGE BLOW	Captain George P. Blow
PRESIDENT BRYAN	Friends of the College of William and Mary
"KING" CARTER	Founded by Robert Carter, revived through the efforts of Mrs. Malbon G. Richardson
CHANCELLOR	Hugh Blair Grisby
JOHN ARCHER COKE	John Archer Coke and Mrs. Elsie Coke Flanagan
EDWARD COLES	Mary Roberts Coles and Mrs. George S. Robins
CORCORAN	W. W. Corcoran
JACKSON W. DAVIS	General Education Board of the Rockefeller Foundation and Friends of the College
GRAVES	Rev. Dr. Robert J. Graves
ROBERT W. HUGHES	Robert M. Hughes, LL.D.
JOSEPH E. JOHNSTON	Robert M. Hughes, Jr.
JOHN B. LIGHTFOOT	Mrs. Mary Minor Lightfoot
MARY MINOR LIGHTFOOT	Mrs. Mary Minor Lightfoot
WILLIAM ARTHUR MADDOX	Susie W. Maddox
ELISHA PARMELE	United Chapters of the Phi Beta Kappa Society
JOSEPH PRENTIS	Judge Robert R. Prentis
JOHN WINSTON PRICE	Starling W. Childs
SOUTTER	James T. Soutter

GENERAL SCHOLARSHIPS

<i>Award</i>	<i>Donor or Source</i>
ALUMNI	Society of the Alumni
THOMAS BALL FUND	Mrs. Alfred I. (Jessie Ball) duPont

<i>Award</i>	<i>Donor or Source</i>
BOOTH-BINNS FUND	Arbella Booth Binns
CHRISTOPHER BRANCH	Blythe Walker Branch
J. BRUCE BREDIN	J. Bruce Bredin
BELLE S. BRYAN	John Stewart Bryan
JOHN STEWART BRYAN FUND	Mrs. Lettie Pate Evans
HARRY LEE CARTER	Harry Lee Carter
J. A. C. CHANDLER	Board of Visitors of the College of William and Mary
J. A. C. CHANDLER MEMORIAL	Robert M. Hughes and friends of Dr. J.A.C. Chandler
JOHN CLOPTON AND JOHN BACON CLOPTON	Mrs. Marie Clopton Jackson
BETTY RUTH CODDINGTON MEMORIAL	Alpha Chi Chapter of Gamma Phi Beta
COGGIN	Mr. and Mrs. William B. Coggin
RUSSELL MILLS COX, JR. WAR MEMORIAL	Dr. Russell M. Cox and Harry Duffield Cox, '43
CRIM	John W. H. Crim
CROMWELL	William N. Cromwell
CHANCELLOR DARDEN SCHOLARSHIP AND LOAN FUND	Mrs. Colgate W. Darden, Jr.
DELTA DELTA DELTA	Alpha Mu Chapter of Delta Delta Delta
EARLY VIRGINIA HISTORY FELLOWSHIP	Order of First Families of Virginia
EDUCATIONAL OPPORTUNITY GRANTS	United States Department of Health, Education and Welfare and College of William and Mary
LETTIE PATE EVANS	Lettie Pate Evans Foundation
CARL A. FEHR MUSIC	William and Mary Choir and Friends of Carl A. Fehr
JUNIUS BLAIR FISHBURN FRIENDS	Junius Blair Fishburn Friends of the College of William and Mary
GENERAL FUND	Board of Visitors of the College of William and Mary
ANNE GOFF	Mrs. Anne B. Goff
ADMIRAL CARY T. GRAYSON GREENE	Anonymous Mr. and Mrs. William H. Greene
HIBBARD MEMORIAL	Captain and Mrs. R. C. Hibbard
IRVIN MEMORIAL	Miss Annie B. Irvin

<i>Award</i>	<i>Donor or Source</i>
KAREN JOHNSON MEMORIAL	The Emil O. Johnson Family and Friends
LAMBDA CHI ALPHA	Epsilon Alpha Zeta Chapter of Lambda
MEMORIAL	Chi Alpha
LANGHORN-PUTNEY	Eugenie D. Turnage
MEMORIAL	
LAWSON-SHELTON	Cheadie Burch Lawson
EDITH NORMENT LUMBYE	Mrs. Virginia N. Potts
MEMORIAL ENDOWMENT	J. Gordon Bohannon
FUND	
RICHARD LEE MORTON	Faculty, Students and Alumni
THOMAS BALL MONTAGUE	Mary W. Montague
GUY LELAND OVERAKER	Friends of Guy Leland Overaker
MEMORIAL	
PAN-HELLENIC	Pan-Hellenic Council of the College of
	William and Mary
PI KAPPA ALPHA	Robert M. Hughes, LL.D.
JOSEPH SCHOOLFIELD	Mrs. Virginia N. Potts
POTTS, JR.	
PRENTICE HILL DRAMATIC	Mrs. Anna Bell Koenig Nimmo
SECOND WORLD WAR	Mrs. Anna Bell Koenig Nimmo
BERTEL RICHARD RASMUSSEN	Mr. and Mrs. Bertel Rasmussen
WAR MEMORIAL	
MARY BOYD RYLAND	Archie Garnett Ryland
MARTHA WALLER SAUNDERS	Alice La Villon Saunders
OSCAR F. SMITH MEMORIAL	Oscar F. Smith
REX SMITH JOURNALISM	Friends of Rex Smith
SOCIETY OF THE CINCINNATI	Society of the Cincinnati in Virginia
FELLOWSHIP IN HISTORY	
TEACHER TRAINING	The General Assembly
SCHOLARSHIPS	
TYLER-CHANDLER	Class of 1920
UNFUNDED	The General Assembly
UNITED DAUGHTERS OF	United Daughters of the Confederacy
THE CONFEDERACY	
VIRGINIA PILOT ASSOCIATION	Virginia Pilot Association of Norfolk,
	Virginia
JOHN PHILIP WAGER	Board of Visitors of the College of Wil-
	liam and Mary
WASHINGTON-JEFFERSON	Daughters of the Cincinnati
ALEXANDER W. WEDDELL	Alexander W. Weddell
VIRGINIA WEDDELL	Mrs. Virginia Weddell

*Award**Donor or Source*

CARTER WHITE

Carter White

WILLIAM AND MARY EDUCATION FOUNDATION

William and Mary Educational Foundation

SPECIAL SCHOLARSHIPS

*Award**Donor or Source*

BORDEN

The Borden Company Foundation

T. C. CLARKE SCHOLARSHIP
AND/OR FELLOWSHIP

T. C. Clarke

LAWRENCE W. HOYT

Thomas G. Paynter

KING MEMORIAL

Faculty and Student Body

LATIN TOURNAMENT

College of William and Mary

MODERN LANGUAGE

College of William and Mary

SCIENCE CONTEST

College of William and Mary

DOW BADISCHE

Dow Badische Company

CHEMISTRY

ROBERT L. GREENE

Robert L. Greene

CHEMISTRY

NEW SCHOLARSHIPS

SCHUYLER OTIS BLAND SCHOLARSHIP. Established June 14, 1969, as a memorial to the Honorable Schuyler Otis Bland, distinguished and loyal alumnus of the College and dedicated public servant and statesman who, until his untimely death, represented ably and well the First Congressional District of Virginia in the Congress of the United States.

WILLIAM F. GEORGE SCHOLARSHIPS. Established by Mrs. Jean George Sykes in memory of her father, William F. George. These scholarships are awarded to women students who are residents of New York and the New England states.

SIMON M. SHUBITZ PRE-MEDICAL SCHOLARSHIPS. Established in 1970 by Simon M. Shubitz, distinguished physician of Los Angeles, California; B.S., College of William and Mary 1930; M.D., Rush Medical College, University of Chicago 1935, member of American Medical Association, Fellow of American College of Cardiology. While a student at William and Mary Dr. Shubitz achieved an outstanding scholastic record, obtaining his B.S. degree in 2 years and 4 months. He was awarded the Robert W. Hughes Scholarship and was elected

to Phi Beta Kappa. These Scholarships are awarded annually to pre-medical students who are preparing to study medicine and who are recommended by the Pre-Medical Faculty Advisor of the College as demonstrating scholastic promise and financial need.

GRADUATE, PROFESSIONAL AND CO-OPERATING SCHOOLS

<i>Award</i>	<i>Donor or Source</i>
COLLEGE OF WILLIAM AND MARY	Massachusetts Institute of Technology
LAW AND TAXATION	J. D. Carneal, Jr.
MATTHEW GAULT EMERY LAW	Theodore S. Cox
KAPPA DELTA PI EDUCATION	Alpha Xi Chapter of Kappa Delta Pi
WILLIAM A. R. GOODWIN MEMORIAL FUND	Mrs. Lettie Pate Evans
EXETER UNIVERSITY	Exeter University and the College of William and Mary
DRAPERS' COMPANY EXCHANGE SCHOLARSHIP	Drapers' Company and College of William and Mary
PHI ALPHA DELTA LAW	George Wythe Chapter of Phi Alpha Delta
PAUL M. SHAPIRO	Family and Friends of Paul M. Shapiro

LOAN FUNDS AND SCHOLARSHIPS

<i>Award</i>	<i>Donor or Source</i>
PHILO SHERMAN BENNETT LOAN FUND	William Jennings Bryan
HOPE-MAURY LOAN SCHOLARSHIP	The Hope-Maury Chapter of the United Daughters of the Confederacy
NORFOLK COLLEGE ALUMNAE ASSOCIATION LOAN SCHOLARSHIP	Alumnae Association of Norfolk College
WILLIAM LAWRENCE SAUNDERS STUDENT AID FUND	William Lawrence Saunders
WILLIAM K. AND JANE KURTZ SMOOT FUND	Fairfax County Chapter, Daughters of the American Revolution

PRIZES

The Lord Botetourt Medal. An annual award to the graduating student who has attained greatest distinction in scholarship. The medal was established in 1772, and has been revived through the generosity of Mr. Norborne Berkeley.

The Blinn History Award. Established in 1965 by Laura Maryland Carpenter Blinn. This award of \$100 is given to the highest ranking senior student in history at the College.

Nathan Burkan Memorial Competition. The American Society of Composers, Authors, and Publishers offers awards of \$250 and a second prize of \$100 for the two best papers submitted by students of the Marshall-Wythe School of Law on a subject of current significance in the field of copyright law.

James Frederick Carr Memorial Cup. A memorial to James Frederick Carr, a former student of the College, who lost his life in the World War, March, 1919. The cup is the property of the College. The student winning the award has his name engraved on the cup. Awarded on the basis of character, scholarship, and leadership. Presented by Mrs. John B. Bentley.

The Educational Foundation Awards. These awards are made annually to the outstanding intramural athlete and to the outstanding intercollegiate athlete among the senior men. In making the awards consideration is given to character, leadership, scholarship and sportsmanship, as well as to athletic prowess. These awards are supported by the College of William and Mary Educational Foundation, Inc.

The William Elbert Fraley Award. A prize of \$100 established in 1969 by the The William Elbert Fraley Memorial Trust as an annual award to a student enrolled in the undergraduate honors program who has done outstanding work in American History.

The Wayne F. Gibbs Award. A prize of \$50 annually shall be awarded to the best student in accounting who shall have successfully completed (or is about to complete) his undergraduate work.

The William A. Hamilton Prize. A prize of \$300 established in 1938 by Charles P. Sherman, D.C.L., LL.D., as a memorial to the late William A. Hamilton, D.C.L., formerly Professor of Jurisprudence and Dean of the School of Economics and Business Administration, awarded to the student graduating in Law who shall write and submit the best essay or thesis on a subject connected with Roman Law or with

Comparative Roman and Modern Law, the subject to be assigned by the faculty of the Marshall-Wythe School of Law.

James Barron Hope Scholarship. Established in 1897 by Robert M. Hughes, LL.D., of Norfolk, Virginia. It is awarded for the best piece of creative writing published in the College magazine and written by a student below senior rank. The scholarship exempts Virginia students from the payment of \$75 in fees and non-Virginia students from \$100 in fees.

The L. Tucker Jones Memorial Prizes. These prizes are awarded annually to the outstanding senior students in the men's and women's intramural programs. In making the awards consideration is given to qualities of leadership, high ideals, and scholastic standing. These prizes are supported by the L. Tucker Jones Memorial Fund.

The Tiberius Gracchus Jones Literary Prize. Established by Archer G. Jones as a memorial to his father, Tiberius Gracchus Jones, who was in residence at the College in 1844-45. The income from the gift of \$1,000 supports a prize for the best English essay submitted by an undergraduate student. The word "essay" includes the poem, the short story, the play, the oration, and the literary essay.

Lawyer's Title Award. The Lawyer's Title Insurance Corporation of Richmond, Virginia, awards an annual prize of \$100 together with an appropriate certificate to the senior or graduating student of law in the Marshall-Wythe School of Law found by the faculty of the Law School to be most proficient in the law of real estate.

The Seidman & Seidman Tax Award. The firm of certified public accountants of Seidman & Seidman makes an annual award of a gold key on which the seal of the College is engraved, to the student in the Marshall-Wythe School of Law who, at graduation, has achieved the highest average in his courses on taxation, provided that his program included at least twelve semester hours in this field.

Sullivan Awards. A medallion awarded by the Southern Society of New York in recognition of influence for good, taking into consideration such characteristics of heart, mind, and conduct as evince a spirit of love and helpfulness to other men and women. Awarded each year to a man and a woman from the student body and to a third person possessing the characteristics specified by the donors.

The Wall Street Journal Achievement Award. A suitably inscribed medal and a year's subscription to the *Wall Street Journal* award to the outstanding senior in finance.

The William and Mary Law School Association Award. Law books to the value of \$25 are given to the student who is judged to have made the best contribution to each issue of the William and Mary Law Review.

PRIZES AND HONOR AWARDS

PHI BETA KAPPA ACADEMIC YEAR, 1969-70 INITIATES-IN-COURSE

Class of 1970

WALLACE BROWN AKERS.....	Roanoke, Virginia
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ROBERT BLAND BELSHE.....	Normal, Illinois
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ANTHONY FREDERICK COLE.....	Hamilton, Ohio
RICHARD CARLTON COOK.....	Williamsburg, Virginia
CATHY LOUISE COVELL.....	Fairfax, Virginia
CAROL ETTA CRUTE.....	Portsmouth, Virginia
ROBERT BRIAN CUSWORTH.....	Penn Yan, New York
KEITH WALTER DAYTON.....	Alexandria, Virginia
PHILIP JAY FRANK.....	Norfolk, Virginia
GEORGE EMIL GADDA.....	Wood-Ridge, New Jersey
JOHN AARON GALLO.....	Richfield Springs, New York
PATRICIA MARIA GRACIAN.....	Williamsburg, Virginia
SERGE VLADIMIR GREGORY.....	Wyckoff, New Jersey
JANE ALISON HALE.....	Arlington, Virginia
VIOLA LEE HAMILTON.....	Richmond, Virginia
LINDA JO HANES.....	Springfield, Virginia
GARY KENT HUDSON.....	Halifax, Virginia
KAREN LEIGH HUDSON.....	Richmond, Virginia
ROBERT ANDREW IRVIN.....	Roswell, Georgia
CAROL MARY KNAPP.....	Alexandria, Virginia
ALBERT WALTON LINDLER.....	Williamsburg, Virginia

MARY JOSEPHINE MONK.....	McLean, Virginia
JAMES WOODROW NEWSOM.....	Arlington, Virginia
BERKLEY RANDOLPH POWELL.....	Hampton, Virginia
WILLIAM MICHAEL RESLER.....	Sarasota, Florida
JOSEPHINE ANASTASIA ROBERTS.....	Richmond, Virginia
JAMES GAITHER SAMSON.....	Newport News, Virginia
CHERYL LYNN SCOTT.....	Alexandria, Virginia
JOHN DANIEL SHEARIN III.....	Williamsburg, Virginia
GRAYCE MEGAN SHIELDS.....	West Lawn, Pennsylvania
MARY BLAKE STITES.....	Falls Church, Virginia
LINDA PEARRE STOCKER.....	Baltimore, Maryland
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NELL STARK WRATHER.....	Alexandria, Virginia
CAROLYN RUTH ZEUL.....	Vienna, Virginia

From the Class of 1969

JOHN NOELL MOORE.....	Rocky Mount, Virginia
STANLEY ALLEN VERNON.....	Independence, Missouri

AWARDS AND PRIZES, 1969-70

The Lord Botetourt Medal: Carolyn Ruth Zeul, Vienna, Virginia.

The James Frederick Carr Memorial Cup: Keith Walter Dayton, Alexandria, Virginia.

The Algernon Sydney Sullivan Awards: Carol Good Roberts, Richmond, Virginia; John D. Shearin III, Richmond, Virginia; Martha Elizabeth Barksdale, Williamsburg, Virginia.

The Tiberius Gracchus Jones Literary Prize: Zoe Ann Fairbairns, Teddington, England.

The Laura Maryland Carpenter Blinn History Award: John Aaron Gallo, Richfield Spring, New York.

The William Elbert Fraley Award: Bruce McLaren Stanley, Naples, Florida.

The Chi Omega Award: Fredericka V. Garber, Richmond, Virginia.

The Wayne F. Gibbs Award: Stanley Eugene Majors, Newport News, Virginia.

The James Barron Hope Scholarship: Richard L. Hansen, Davenport, Iowa.

The Lawyer's Title Award: Thomas Joseph Donovan, Williamsburg, Virginia.

The Nathan Burkan Memorial Competition: No Award.

The Seidman & Seidman Tax Award: Robert Samuel Parker, Jr., Williamsburg, Virginia.

The Wall Street Journal Achievement Award: Stanley Kirk Bryde, Wilmington, Delaware.

MERIT SCHOLARSHIPS 1970-71

Chancellor: ELIZABETH RESPESS VAIL, Alexandria, Virginia

Elisha Parmele: DAVID FREEMAN SILVER, Raleigh, North Carolina

Joseph Prentis: JERRY ALLEN COYNE, Arlington, Virginia

George Blow: ROBERT VICTOR JONES, Petersburg, Virginia

Joseph E. Johnston: MARY FRANCES LOWE, Glen Burnie, Maryland

John Archer Coke: RODNEY DAVID WILKINSON, Norfolk, Virginia

Robert W. Hughes: MARTHA MARY STEBBINS, Chester, Virginia

Edward Coles: VIRGINIA ANNE VOGEL, F.P.O., New York, N. Y.

"King Carter: PATRICIA LOUISE RUSSELL, Ft. Worth, Texas

Corcoran: FRANKIE ANN HOLMES, Virginia Beach, Virginia

Soutter: KATHI ANN GRILLS, Oberlin, Ohio

Graves: VIRGINIA ANN KLEMKOWSKI, Baltimore, Maryland

John B. Lightfoot: ROBIN WALLACE ROSSER, Billerica, Mass.

Mary Minor Lightfoot: MARY ALICE WHELAN, Springfield, Virginia

John Winston Price: MARGARET LOUISE CARTER, Williamsburg, Virginia

William Arthur Maddox: ELIZABETH HANSFORD PERCY, Lynchburg, Virginia

Henry Eastman Bennett: KAREN MARGARET LARSON, Morris Plains, New Jersey

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Jackson W. Davis: RANDALL STEPHEN STRANGE, Newport News, Virginia

DEGREES CONFERRED

Regular Session 1969-1970

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CHARLENE GAYLE CRAWLEY
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ELLEN JANE JONES
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*ROBERT SENIOR KENNEDY

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 JAY CARLTON DECH
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 CHERYL ANNE HELMS

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 RENÉE GUENARD HENNINGER
 RUSSELL WHITE HEREFORD

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 ANNE RAINEY SIMS O'TOOLE
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 RICHARD WILLIAM SIZEMORE
 LARRY BENJAMIN SLIPOW
 SUSAN GORDON SMART
 AVERY ANNE SMITH
 DEBORAH JOAN SMITH
 JANET ELIZABETH SMITH
 JOHN DAIREN SMITH
 REBECCA ANNE SMITH
 RITA MAE SMITH
 *BARBARA LOUISE SMOCK
 DAVID MARK SOTTILI
 PAULA MELDRIM SOUTHWELL
 KATHERINE ANNETTE SPENCER
 JACQUELINE M. SPURLING
 NORMAN KENT SPURLING
 DAVID BRETT STAMPS
 BRUCE McLAREN STANLEY†
High Honors in History
 RICHARD ALAN STARK

* Degree Requirements Completed Prior to May 29, 1970.

† General Honors Program.

JUDITH ANN STEFFAN
 SANDRA RHEA STEMPLER
 RAYMOND EUGENE STEPHENS
 RONALD LEE STEWART

*MARY B. STITES
 LINDA PEARRE STOCKER
 ROBERT GEORGE STONE

DAVID LYTER STOUT
 JACQUELYN STUMP
 PATRICIA ANN SWEEZY

Honors in English

HENRY BEVERLY TAYLOR, JR.
 HOLLY PETERSON TAYLOR
 CHARLES PETER TENCH
 GEORGE JEFFREY THIEL
 DONALD MEADE THOMAS
 LESLIE RICHARD THOMAS
 PEGGY LEE SCOTT THOMAS
 DAVID RANDOLPH THOMPSON
 JANE NEFF THOMPSON
 PATRICIA ANN TICE
 KAY LA VAUGHAN TUCKER
 THOMAS RANDOLPH TUCKER
 KENNETH ROY UNZICKER
 DONNA RUTH URQUHART
 STEPHEN JOHN VAN HOOK
 BENJAMIN ALLEN VAUGHAN
 MARILYN CAY VERHEYDEN
 NICHOLAS CHRISTIAN VINYARD
 MARIE ISABELLE VON ELTEN
 RICHARD LEE WADE
 BARBARA BUTLER WAESCHE
 ROBERT JAMES WAGNER

High Honors in English

MICHAEL MARTIN WAKEFIELD
 EDGAR ROBERT WALKER, JR.
 RICHARD R. WALKER
 *SUZANNE TATUM WALKER
 TIMOTHY R. WALTON

VIRGINIA KYLE WARREN
Honors in English

THOMAS BEVERLY WATKINS
 DAVID PERRIN WATSON
 *GEORGE H. WATSON III
 CATHY ELIZABETH WEBB
 SANDRA LEE WEBB
 STEPHEN CASS WEILAND
 WILLIAM JOSEPH WEISS
 DEBORAH J. WENDER

Honors in Psychology

GEORGE THOMAS WEST
 PURNELL H. WESTBROOK, JR.
 LAURA MARIE WHEELER
 SUSAN K. WHELDON
 MARK ANTHONY WICKLEY
 GENE WILLIAM WIGGINS
 CONNIE LOU WILLIAMS
 G. DAVID WILLIAMS
 GARY SANDERS WILLIAMS
 JAMES REID WILLIAMSON
 CATHY EILEEN WINE
 DAVID ERVIN WINN
 JOHN ALAN WOHLLEBEN
 EDWARD MANNING WOOD
 STEPHEN LEE WOODFORD
 *ANN MARIE WOOTEN
 JAMES MASON WORTHINGTON
 NELL STARK WRATHER

Honors in Modern Languages

*MARGARET GALL YOUNG
 GREGORY CHARLES ZAKARIAN
 JOHN PAUL ZEMLAN
 SANDRA ZENKER
 NANCY CASE ZENTNER
 CAROLYN RUTH ZEUL

High Honors in Sociology

RICHARD GALT ZIMMERMANN, JR.
 PETER ALBERT ZUGER

* Degree Requirements Completed Prior to May 29, 1970.

MASTERS OF BUSINESS ADMINISTRATION

*JAY ALAN ANTHONY

B.A., College of William and Mary, 1965.

*DANNY J. BEAKEY

B.B.A., University of Oklahoma, 1959.

*JAMES W. BECKER

B.S., The Creighton University, 1963.

*CHARLES CARSON CHAPMAN

B.M.E., University of Florida, 1965.

*DENNIS KYLE COGLE

B.A., College of William and Mary, 1949.

*KATHLEEN MARY FITZGERALD

B.A., Smith College, 1968.

BRUCE FOWLER

B.S., Virginia Military Institute, 1956.

THOMAS RAYMOND GANNON

B.S., South Dakota State College of Agriculture and Mechanic Arts, 1965.

HOLLIS GORDON GLOVER

B.S., Atlantic Christian College, 1965.

CARL W. GUENTHER II

B.S., University of Missouri, 1963.

*EDWARD L. HUBBARD

B.S., Frederick College, 1966.

EDWARD FRANK IFKOVITS

B.A., College of William and Mary, 1959.

EUGENE WALDEN JOHNSON

B.S., Hampton Institute, 1949.

DAVID WILSON LARMORE

B.A., College of William and Mary, 1968.

*FRANK H. LESTER

B.S., East Carolina College, 1968.

*Degree Requirements Completed Prior to May 29, 1970.

ROBERT WAYNE LOWRY

B.S., Richmond Professional Institute, 1969.

*GORDON WILLIAM MABIE

B.A., Furman University, 1964.

KEVIN E. MCKAY

B.S., United States Military Academy, 1954.

LARRY DENNIS METCALFE

B.S., University of Richmond, 1968.

MEL M. OVERMAN

B.S., Virginia Polytechnic Institute, 1961.

KENNETH KERMIT PLEMMONS

B.S., Virginia Polytechnic Institute, 1964.

JOHN J. RICE

B.A., University of Richmond, 1964.

*GARRY L. SMITH

B.S., Kansas State University, 1967.

JOHN ANDERSON TRICE III

B.S., College of William and Mary, 1969.

WILLIAM TAYLER VROOMAN II

B.S. in Business, Richmond Professional Institute, 1958.

CHARLES HENRY WHITLOCK III

B.A.E., University of Virginia, 1961.

M.A.E., University of Virginia, 1965.

LUCIUS CARUSO WYATT

B.S., Hampton Institute, 1947.

MASTERS OF EDUCATION

*YVONNE ARMISTEAD ADAMS

B.A. in Ed., Madison College, 1958.

*JEANENE IRIS ANKER

B.A., Old Dominion College, 1964.

JACK MARTIN ARMISTEAD

B.S., Appalachian State Teachers College, 1963.

* Degree Requirements Completed Prior to May 29, 1970.

*EDGAR BALL

B. of Music, University of Southern California, 1963.

*SHIRLEY DONNELLY BARCO

B.A., College of William and Mary-V.P.I.-Norfolk, 1957.

PATRICIA VASBINDER BARTLETT

B.A., Bucknell University, 1960.

*BRUCE B. BAXTER, JR.

B.S. in Education, Ohio State University, 1939.

*MILDRED FERRELL BELL

B.S. in Elem. Ed., Longwood College, 1965.

MARY VASSILICOU BICOUVARIS

B.S., Ohio State University, 1963.

*SANDRA FOSTER BIRDSONG

B.A., Longwood College, 1964.

*JOHN METCALFE BLAIR

B.S., St. Benedict's College, 1966.

KENNETH GREGORY BUTLER

B.A., College of William and Mary-Norfolk Division, 1962.

JERRY THOMAS CARTER

B.A., Atlantic Christian College, 1966.

PATRICIA WOODY CARTER

B.A., Pembroke State College, 1968.

*DIANE DOUTHAT CAUTHEN

B.S., Richmond Professional Institute, 1962.

PETER ESTES CLARKE

B.A., University of New Hampshire, 1966.

*ALICE RICE COTTINGHAM

B.A., College of William and Mary, 1951.

*JANET LYNNE COURLY

B.S., Maryville College, 1965.

*PATIENCE JORDAN CREDLE

B.S., Woman's College of the University of North Carolina, 1943.

* Degree Requirements Completed Prior to May 29, 1970.

FRANCES GARDNER CURTIS

B.A., Sweet Briar College, 1947.

DOROTHY JONES DAVIS

B.A., Randolph-Macon Woman's College, 1941.

GLENN P. DAVIS

B.S., Spring Hill College, 1966.

*GEORGE GORDON DIXON

B.A., Methodist College, 1966.

MARY ANDREWS DUBERG

B.S., University of Illinois, 1943.

*ELISE LINDBLOOM EMANUEL

B.S., Colorado State University, 1960.

*WILLARD DWIGHT FOOR

B.S., State Teachers College, Lock Haven, Pennsylvania, 1960.

ELIZABETH SARGEANT FRANCIS

B.S., Madison College, 1960.

LESLIE PAUL FRYAR

B.S., State Teachers College, Indiana, Pennsylvania, 1961.

*MARILYN GRUNEICH GANNON

B.S., South Dakota State College of Agriculture and Mechanic Arts, 1967.

CHARLOTTE KING GIBBS

B.A., University of Denver, 1949.

*LINDA YVONNE GOODMAN

B.A., Norfolk Division-Virginia State College, 1968.

*ROBERT ALVIN GOULDER

B.A., Randolph-Macon College, 1961.

*RUTH HUDNALL GRESHAM

B.A., College of William and Mary, 1964.

*JOHN CARTER HALEY

B.A., University of Florida, 1952.

*WADE ARNOLD HALSEY

B.S., Eastern Kentucky State College, 1961.

* Degree Requirements Completed Prior to May 29, 1970.

JUANITA CALLIS HAMMOND

B.S., State Teachers College, Farmville, Va., 1938.

*PATRICIA DARLENE STRINGER HANAFORDE

B.S., University of Florida, 1966.

JANE DODRILL HANSON

B.A., College of William and Mary, 1967.

*JOHN CARLETON HEALEY

B.A., University of Michigan, 1969.

*ROBERT B. HENSLEY

B.S., Oklahoma Agricultural and Mechanical College, 1933.

HELLMUT H. HERDEY

B.S., Central Connecticut State College, 1965.

MARY BURTON HILL

B.S., Old Dominion College, 1967.

PATRICIA LOUISE HOUSE

B.A., University of North Carolina, 1956.

*MARTHA CARR HUDDLESTON

B.A., Mary Washington College of the University of Virginia,
1950.

WILLIAM PRESTON JACKAMEIT

B.A., Newark College of Arts and Sciences, 1966.

M.A., Rutgers—The State University, 1967.

ELSIE DE LAURA ALBERTSON JONES

B.S., Longwood College, 1961.

*BETSY WAYNE JOYNER

B.S., Longwood College, 1961.

DANIEL F. KELLIHER, JR.

B.S., State College at Bridgewater, Massachusetts, 1967.

JUDITH GAIL KIPP

B.S., State Teachers College, Indiana, Pennsylvania, 1961.

HILDA M. KUHL

B.S., Appalachian State Teachers College, 1965.

* Degree Requirements Completed Prior to May 29, 1970.

*MARGARET ELIZABETH LAMBERTH

B.S., Mary Washington College of the University of Virginia,
1943.

WANDA JACKSON LAYNE

B.S., Madison College, 1951.

*PAUL W. LOVGREN

B.S., Kansas State Teachers College, 1963.

MARY OLLIE VEE LOWE

B.S., Madison College, 1951.

*LAWRENCE ARTHUR MARTIN

B.A., Saint Stephens College, 1967.

*PHYLLIS JAYNE MAXWELL

B.S., Ohio University, 1942.

MARGARET S. McLINTOCK

B.S., Richmond College-University of Richmond, 1968.

NANCY STOVER MEGEE

B.A., George Washington University, 1947.

*JEAN TIGNOR MENDELIS

B.S., Old Dominion College, 1964.

*CARLOS LEE PETER MILLS

B.S., Appalachian State Teachers College, 1950.

ELOYCE McPHEE MOUNGER

B.S., Old Dominion College, 1967.

*EMILY BRANCH MURPHY

B.A., Westhampton College, 1965.

*ELIZABETH PINCKNEY DAINGERFIELD NEWTON

B.A., College of William and Mary, 1967.

*HAROLD FREDERICK NORTON, JR.

B.S., U. S. Coast Guard Academy, 1959.

*DAVID CHARLES OSTROM

B.S., John Carroll University, 1964.

ERNEST E. PAYNE

B.S., Western Kentucky State Teachers College, 1949.

*Degree Requirements Completed Prior to May 29, 1970.

- *FLORENCE B. PRIDE
B.S., Longwood College, 1964.
- DONALD FREDERICK PURINTON
B.S., Boston University, 1960.
- *ELLA WALDRON ALLEN ROACH
B.A., College of William and Mary, 1943.
- *WILLARD LEON RODGERS
B.S., Kansas State University, 1951.
- *JEROME McILWAINE SANDFORD
B.S., East Carolina College, 1953.
- GAYE YATES SEIBERT
B.S., Longwood College, 1961.
- *HORST HEINRICH SEIBERT
B.S., Old Dominion College, 1967.
- *FRANCES BUSKEY SELLEW
B.S., Old Dominion College, 1964.
- *CONSTANCE LAUDIG STEWARD
B.A., Lynchburg College, 1956.
- RANDAL WHITMAN SMITH
B.A., Connecticut College, 1961.
- *MARY ANNE SOMERS
B.A., Longwood College, 1969.
- *BOBBY GENE STACY
B.S., University of Richmond, 1960.
- EDWARD WHITMER STEERS III
B.S., The Citadel, 1968.
- WILLIAM P. STILL, JR.
B.A., Emory and Henry College, 1964.
- *RAYMOND JERREL SUTTON
B.S., Richmond Professional Institute, 1964.
- *C. JUANITA WRAY WALLACE
B.S., Hampton Institute, 1962.

BEATRICE HAYES WESTERVELT

B.S., Danbury State College, 1952.

*JOHN LEONARD WHITLEY

B.A., Wake Forest College, 1961.

*WILLIAM LEE WHITLEY

B.A., Randolph-Macon College, 1955.

*ANNE GOODLOE WILLIAMS

B.S., Mary Washington College of the University of Virginia, 1946.

BETTY EDGERTON WOOLLEY

B.A., Mount Holyoke College, 1935.

ETHELWYN JEANNE WORNOM

B.S.M., Eastern Baptist Theological Seminary, 1950.

JUNE VINSON YEATES

B.A., Western Kentucky State Teachers College, 1942.

CERTIFICATES OF ADVANCED STUDY IN EDUCATION

THELMA SARA BIDDLE

B.S., State Teachers College, Trenton, New Jersey, 1945.

M.Ed., College of William and Mary, 1965.

EDWARD ERNEST BRICKELL, JR.

B.A., College of William and Mary, 1950.

M.A., University of Chicago, 1951.

DONALD S. BRUNO

B.A., West Liberty State College, 1952.

M.Ed., College of William and Mary, 1957.

BETTIE CHITTY CHAPPELL

B.A., University of North Carolina at Greensboro, 1943.

M.Ed., College of William and Mary, 1961.

IRA RICHARD HANNA

B.S., United States Naval Academy, 1957.

M.A., Old Dominion College, 1967.

GLORIA TYLER ROBERTSON

B.A., Westhampton College, 1944.

M.Ed., College of William and Mary, 1966.

* Degree Requirements Completed Prior to May 29, 1970.

MASTERS OF SCIENCE

WARREN WESLEY BUCK III

B.S., Morgan State College, 1968.
(Physics)

KUN-SAN CHANG

B.S., National Taiwan Normal University, 1964.
(Physics)

RICHARD KNIGHT HESTER

B.A., George Washington University, 1968.
(Physics)

CHENG-SHONG HSIEH

B.S., Taiwan Normal University, 1965.
(Physics)

GAIL COURSEY HUNT

B.S., College of William and Mary, 1968.
(Physics)

FRANCIS RICHARD KANE

B.S., Loyola College, 1965.
(Physics)

BRADLEY LEE ROBERTS

B.S., University of Virginia, 1968.
(Physics)

ALPHONSA SMITH

B.S.-Engineering, Tuskegee Institute, 1962.
(Physics)

JENG-SHYONG TSAI

B.S., Taiwan Normal University, 1966.
(Physics)

DU-SHAN TSOU

B.S., Fugen Catholic University, 1968.
(Mathematics)

*JAMES LLOYD WILLIAMS

B.S.E., University of Michigan, 1951.
(Mathematics)

* Degree Requirements Completed Prior to May 29, 1970.

MASTERS OF ARTS

WINIFRED LEE ANGELO

B.A., University of Delaware, 1968.

(Psychology)

SANDRA KAYE BURDEN

B.A., The University of North Carolina (Chapel Hill), 1967.

(Government)

BEVERLY WILSON CARROLL

B.A., University of California—Berkeley, 1952.

(Psychology)

*MICHAEL L. FINE

B.S., University of Maryland, 1967.

(Marine Science)

DAVID ALGER GAPP

B.S., College of William and Mary, 1967.

(Biology)

ROBERT WAYNE GRAY

B.A., College of William and Mary, 1967.

(History)

WILLIAM ALLEN HAZLETON

B.A., Depauw University, 1967.

(Government)

JOSEPH FRANCIS HEALEY

B.A., College of William and Mary, 1967.

(Sociology)

*PAUL BRENT HENSLEY

B.A., Lynchburg College, 1967.

(History)

SUSAN ELIZABETH HILLIER

B.A., University of Liverpool, 1968.

(History)

SHARON CONLEY HIXON

B.S., University of Alabama, 1965.

(Chemistry)

WILLIAM GRESBY HUGHES

B.A., College of William and Mary, 1968.

(Psychology)

JOHN TRACY KEENE, JR.

B.A., Bowdoin College, 1969.

(History)

* Degree Requirements Completed Prior to May 29, 1970.

CHARLES L. KILLINGER III

B.A., Southwestern at Memphis, 1964.
(History)

*JAMES K. LOWRY

B.A., University of Richmond, 1965.
(Marine Science)

WILLIAM FRANK McCONNELL

B.A., Malone College, 1968.
(Biology)

*CAROLINE PATRICE PECK

B.A., San Diego College for Women, 1962.
(History)

KATHERINE TIPPETT READ

B.A., Radford College, 1965.
(History)

*MICHAEL JOHN SEBETICH

B.S., Duquesne University, 1965.
(Biology)

WILLIAM H. TONER, JR.

B.A., Franklin and Marshall College, 1966.
(History)

MARTHA ALLEN TURNAGE

B.A., Wake Forest College, 1944.
(Sociology)

ELLA MAY THOMSON WULFF

B.A., Smith College, 1966.
(Marine Science)

ARTHUR L. ZACHARY

B.S., Brooklyn College, 1966.
(Marine Science)

DOCTORS OF JURISPRUDENCE

EILEEN M. ALBERTSON

B.A., Bloomsburg State College, 1967.

LONNIE GARY BARNES

B.S., Old Dominion College, 1968.

*DOUGLAS K. BERGERE

B.S., Virginia Military Institute, 1964.

* Degree Requirements Completed Prior to May 29, 1970.

*MICHAEL McHALE COLLINS, JR.

B.A., University of Virginia, 1966.

THOMAS ASA CONNOR

B.A., College of William and Mary, 1965.

STEPHEN RUTTY CRAMPTON

B.A., Middlebury College, 1961.

M.A., Trinity College, 1967.

THOMAS JOSEPH DONOVAN

B.A., Rutgers College, 1965.

RALPH ALEXANDER ELMORE III

B.A., College of William and Mary, 1967.

BARNEY ROLAND FREASIER, JR.

B.S. in Bus. Adm., Richmond College—University of Richmond,
1961.

ANTHONY GAETA, JR.

B.A., Wesleyan University, 1967.

*WALTER B. GOLDEN III

B.A., American University, 1967.

*THOMAS NORFLEET GRIFFIN

B.S., United States Military Academy, 1929.

*EARLE T. HALE

B.A., Old Dominion College, 1967.

THOMAS EUGENE HANEY

B.S., Michigan State University, 1962.

*RANDALL STONE HAWTHORNE

B.A., College of William and Mary, 1967.

DENNIS CLAIR HENSLEY

B.S., University of Illinois, 1967.

ROBERT BRUCE INGRAM

B.A., Drake University, 1962.

JAMES SIDNEY INSLEY

B.A., Randolph-Macon College, 1967.

*PAUL EDWARD JENSEN

B.A., Alma College, 1967.

*CALVIN RUDOLPH JOHNSTON

B.S., Virginia Polytechnic Institute, 1956.

*JOSEPH H. KELLEY

B.S., Illinois State University, 1967.

BRUCE RANDOLPH LANGE

B.A., Lawrence University, 1967.

TERRY BARNUM LIGHT

B.A., Yale University, 1958.

*JAMES M. LOWE

B.A., College of William and Mary, 1968.

CARL STEPHEN MARKOWITZ

B.S., University of Virginia, 1967.

CLEYBURN LYCURGUS McCAULEY

B.S., United States Military Academy, 1950.

M.S., Stanford University, 1959.

JAMES LATINUS McLEMORE III

B.A., Randolph-Macon College, 1967.

CHARLES FRANKLIN MIDKIFF

B.S. in Bus. Adm., Old Dominion College, 1968.

GEORGE SAMUEL NEWMAN

B.A., McGill University, 1967.

ROBERT SAMUEL PARKER, JR.

B.S., University of Virginia, 1965.

SAUL RALPH PEARLMAN

B.S., University of South Carolina, 1967.

KENNETH A. PHILLIPS

B.A., College of William and Mary, 1967.

EDMUND POLUBINSKI, JR.

B.A., Syracuse University, 1967.

WILLIAM RYDER REGISTER

B.S., College of William and Mary, 1967.

* Degree Requirements Completed Prior to May 29, 1970.

LEONARD E. RINGLER

B.S., Virginia Polytechnic Institute, 1967.

*JOHN JAMES SABOURIN, JR.

B.A., Michigan State University, 1967.

HARRY DAVID SAUNDERS

B.A., Oklahoma State University, 1967.

*DONALD EDWARD SCEARCE

B.A., Richmond College—University of Richmond, 1962.

WILLIAM LLOYD SCOTT, JR.

B.A., College of William and Mary, 1967.

HOWARD PHILLIP SMITH

B.A., Richmond College—University of Richmond, 1967.

EDWARD POINDEXTER SNEAD

B.A., University of Virginia, 1950.

M.C., University of Richmond, 1968.

*STUART DOUGLAS SPIRN

B.A., College of William and Mary, 1967.

*C. VERNON SPRATLEY III

B.A., College of William and Mary, 1967.

ALBERT JOSEPH TAYLOR, JR.

B.A., Belmont Abbey College, 1964.

GERARD ERNEST WILFRID VOYER

B.A., College of the Holy Cross, 1967.

GEORGE ROBERTSON WRIGHT

B.A., Lafayette College, 1967.

JEFFREY MICHAEL ZWERDLING

B.S., Richmond Professional Institute, 1967.

DOCTOR OF PHILOSOPHY

G. ALEX MARSH III

B.S., Wake Forest College, 1960.

M.A., University of North Carolina, 1963.

(Marine Science)

* Degree Requirements Completed Prior to May 29, 1970.

DEGREES CONFERRED

Summer Session 1970

BACHELORS OF SCIENCE

DIANA DEANE CARR
WILLIAM GEORGE GILLESPIE
ANTONY THOMAS HURST
SARA KOSSUTH SANDFORD

ELAINE ALDENE ULMET
KATHLEEN LOUISE WALDRON
DEBORAH JEANNE WALTRIP

BACHELORS OF ARTS

CORINNE HANCOCK ABBITT
DOROTHY RANES ABERCROMBIE
MICHAEL HARBECK ARNDT
JOHN BENNETT ARTMAN
LOIS GERTRUDE ASBURY
SCOTT PETER AYERS
BARBARA JUNE BRUCE
VIRGINIA KATHLEEN BUXTON
LAURA PAINTER CIFELLI
CAROLYN MEREDITH CLAY
DOROTHY BERCK COBB
HAROLD EUGENE COCHRAN
ANN ROSE COLASURDO
EVLYN MOORE CONNERY
MARY OTTLEY COOKE
KENNY MAXWELL DALE
JOHN HOWARD DEAN
HADA MARIE DA VARONA
JAMES EDWIN ELLIOTT
LARRY CARPENTER ELMORE
ANNE TALLEY FREEMAN
EDWARD DARRELL GARDNER, JR.
JANET FERGUSON GASKINS
JOHN PORTER GRIFFIN, JR.
VIOLA LEE HAMILTON

High Honors in Psychology

DIANA SHIMLER HURST
BONNIE BROOKS JENNINGS

EDWIN CLAY KELLAM, JR.
JAMES DEXTER LARSON
IRVING CLAIBORNE LUNSFORD III
JANET LOUISE COLLINS
MACCLARENCE
KRISTINA EILEEN MADDOCKS
JAMES HENRY McDUFFIE, JR.
DONALD ALLEN MCGLOTHLIN, JR.
VIRGINIA GARRETT MCKINNON
BARBARA RICHARDSON MILLER
CARL KLAUDER E. MILLER, JR.
GORDON JOHN MOFFITT
PATRICIA ANN MONAHAN
RICHARD EDWARD MOORE
FRANCIS A. O'CONNOR
LAURA LEE OWENS
DORA KAY PHILLIPS
RICHARD LEE PIERCE
KIM VICKY ROBINETTE
JOSEPH JAMES ROLLINS
KATHLEEN PICCHI SACZYNSKI
JENNIFER REBECCA SAMUELS
JAMES LAWRENCE SAUNDERS
DAVID U. SCHINDEL
NANCY R. SHEA

Highest Honors in Fine Arts

CHARLES CURTIS SHEFFIELD
ROBERT WILLIAM SHERWOOD, JR.

PATRICIA FITZPATRICK SMITH	KIM ELLEN WATSON
LINDA E. SULLIVAN	DONNIE LEE WILSON
ROLL ALBERT SULLIVAN	KEITH TROWER WITT
ALICE COSTANDINA TITUS	GEORGE DONIS YANCEY
ANN ELIZABETH WATSON	SUSAN VAUGHAN ZEHLER

MASTERS OF BUSINESS ADMINISTRATION

RICHARD BROOKS COLTRANE, JR.

B.A., University of Virginia, 1961.

JOHN WILLIAM DIXON

B.S., Quinnipiac College, 1969.

ANN E. DOLLHOFF

B.S., State College (Indiana, Pa.), 1964.

GARRY MORRISON EWING

B.A., North Carolina Wesleyan College, 1968.

WILLIAM PEAVY FRICKS

B. of Industrial Management, Auburn University, 1966.

SURESHCHANDRA CHANDULAL GANDHI

B.A., Gujarat University, 1966.

B.Com., Gujarat University, 1966.

CHARLES CLARENCE MALITZ III

B.S., Texas A. and M. University, 1968.

LESLIE MORGAN MORRIS, JR.

B.S., Wake Forest University, 1967.

ROY EUGENE MOSS

B.A., College of William and Mary, 1951.

ROBERT GAITHER NEWNAM

B.S., Old Dominion College, 1966.

ROBERT THOMAS PINIZZOTTO

B.S. in Bus. Adm., LaSalle College, 1963.

OWEN L. RATCLIFF, JR.

B.S., Purdue University, 1963.

HARRY R. SHERTZER, JR.

B.S. in B.A., American University, 1969.

JESSE S. TARLETON

B.S., Pennsylvania State College, 1952.

Ph.D., Cornell University, 1958.

JAMES A. VICTOR

B.S., University of Maine, 1956.

JAMES AVERY WALLER, JR.

B.S. in Industrial Engineering, North Carolina State College of
Agriculture and Engineering, 1966.

MASTERS IN TEACHING OF SCIENCE

RICHARD LEROY BALDWIN

B.S., University of Minnesota, 1965.

(Biology)

HENRY J. BOUCHER

B.S., Le Moyne College, 1963.

(Biology)

EDWIN THOMAS BROOKS

B.S., State University Teachers College (Oneonta, N.Y.), 1966.

(Physics)

JOHN ELSWORTH BROWN

B.S., Wisconsin State College, 1962.

(Chemistry)

RICHARD ALLEN BRUNT

B.S., Michigan State University, 1965.

(Biology)

HERBERT A. COPENHAVER, JR.

B.A., Columbia Union College, 1966.

(Biology)

WILLIAM J. EHREN III

B.S., The University of Wisconsin, 1965.

(Chemistry)

BRADFORD V. EK

B.S., Springfield College, 1963.

(Chemistry)

SISTER EMILY FEISTRITZER, O.S.B.

B.A., Villa Madonna College, 1966.
(Physics)

THEODORE JOSEPH GEFFERT

B.A., Kings College, 1964.
(Mathematics)

WILLIAM F. HUGHES, JR.

B.S. in Education, State College (Indiana, Pa.), 1963.
(Physics)

CLAIRE WILLIAM JOHNSON

B.S., Wisconsin State College at Eau Claire, 1965.
(Mathematics)

GERALD PATRICK JOYCE

B.S., United States Naval Academy, 1937.
(Physics)

ANTHONY T. LAGINA

B.A., Western Michigan University, 1964.
(Physics)

SISTER PIERRE MEYER, C.S.J.

B.A., Marymount College, 1964.
(Mathematics)

WILLIAM E. MOORMAN, JR.

B.S., Virginia Military Institute, 1951.
(Physics)

SISTER JOHN BAPTIST PLACKE, C.S.J.

B.S., Marymount College, 1965.
(Mathematics)

DAVID J. RUSCUS

B.A., Seton Hall University, 1965.
(Chemistry)

PAUL DOUGLAS SCOTT

B.S., Pikeville College, 1965.
(Mathematics)

EUGENE BOWIE SHEPHERD, JR.

B.S., Hampden-Sydney College, 1965.
(Mathematics)

FRANKLIN DAVID SLAGLE

B.S. Secondary Education, West Virginia University, 1966.
(Chemistry)

JAMES R. SMOKER

B.S., Albright College, 1965.
(Biology)

PAMELA G. SPENCER

B.S. in Secondary Education, Longwood College, 1965.
(Biology)

HELEN BRIGGS STRICKLAND

B.S., Wake Forest College, 1965.
(Mathematics)

JAMES E. SUTTER

B.S., Mankato State College, 1965.
(Physics)

MASTERS OF EDUCATION

SUSAN JANE ALBERT

B.A., Lycoming College, 1969.

ANN WYTHE SINCLAIR ALLEN

B.S. in Elementary Education, Old Dominion College, 1967.

JUDITH MATHEWS ASCHER

B.A., Pfeiffer College, 1963.

EUGENIA CHARLOTTE AVERY

B.S. in Education, State Teachers College (Farmville, Va.), 1941.

KATHLEEN SUZANNE BAHR

B.S., University of Rochester, 1969.

BERETTA YEOMAN BANKS

B.S. in Elementary Education, Longwood College, 1957.

LILLIAN ROBINSON BELLAMY

B.S., Hampton Institute, 1953.

JUDY MCINTURFF BROWN

B.A., Emory and Henry College, 1952.

WILLIAM GORDON BUCHANAN III

B.S., College of William and Mary, 1968.

ELMER WAYNE BULLIS

B.A., College of William and Mary, 1967.

JAMES MARSHALL CAKE

B.S., Cornell University, 1942.

ELLA JANE BAUMANN CARDENAS

B.S., Southwest Texas State Teachers College, 1948.

SISTER MARIA DEL CARMEN, R.S.M.

B.A., Villanova University, 1952.

M.A. in Education, Seton Hall University, 1960.

VIRGINIA McALHANY CLEMONS

B.S., Berry College, 1951.

LILLIAN GAIL COHOON

B.S., East Carolina College, 1960.

KENNETH WAYNE COKER

B.A., College of William and Mary, 1965.

RONALD DOUGLAS COLTRANE

B.A., Lynchburg College, 1967.

MARY H. CORNELIUS

B.A., Carleton College, 1966.

WAYNE MANUEL COSBY

B.S., East Carolina College, 1963.

DOUGLAS BARKER DANN, JR.

B.A., College of William and Mary, 1966.

WILLIAM HENRY DANZEISEN, JR.

B.S. in Education, Temple University, 1952.

JAMES JOSEPH DEES

B. of Education, Duquesne University, 1961.

MERRILL-JEAN BARBER DICK

B.A., College of William and Mary, 1967.

GEORGE CHANDLER FAIRBANKS IV

B.S., College of William and Mary, 1969.

HELEN WARD FORREST

B.S. in Elementary Education, Longwood College, 1930.

MARY ELEANOR GREEN

B.S. in Education, Elizabeth City State Teachers College, 1957.

EMMA LOU HANKS

B.S., Radford College, 1966.

PATRICIA HUBBELL HARRIS

B.A., College of William and Mary, 1966.

WILLIAM LEONARD HELTON, JR.

B.A., Lenoir Rhyne College, 1965.

DEAN VANCE HOLBERT

B.S., Richmond Professional Institute, 1966.

LEON F. HUGHES

B.A., College of William and Mary, 1964.

EARL EDWARD HUMPHREY

B.S., Milligan College, 1964.

MAYANNE ELITHE JACOBS

B.A., Indiana University, 1937.

BRENDA ANN JOHNSON

B.S., Hampton Institute, 1968.

OLIVIA JAMES JOHNSON

B.S., Longwood College, 1968.

WILLIAM MCKINLEY JOHNSON

B.S., South Carolina State College, 1960.

BARBARA ANN KELLY

B.S., East Carolina College, 1961

CLARENCE HOWARD KEVILLE, JR.

B.A., Richmond College, University of Richmond, 1956.

ROY LEE KING

B. of Music Education, Richmond Professional Institute, 1967.

ROGER LAWRENCE LACOURSE

B. of General Education, The Municipal University of Omaha, 1966.

RITA MARY LORENZ LASS

B.S. in Education, Drake University, 1962

SUSAN BOGESE MACLAUGHLIN

B.S., Mary Washington College of the University of Virginia,
1966.

ROLAND JACKSON MAGEE, JR.

B.S. in Secondary Education, Old Dominion College, 1967.

ROBERT HARRY MAHAFFY

B.A., College of William and Mary, 1953.

DENNIS LLOYD McCURDY

B.S. in Secondary Education, Old Dominion College, 1965.

MARY NEAL McFARLAND

B.A., Randolph-Macon Woman's College, 1949.

JAN CLARKE McGURK

B.A., University of Miami, 1965.

ANNE-LISA SCHINDLER MILLS

B.S. in Education, Madison College, 1960.

CLYDE FREDRICK MITCHELL

B.A., Hampden-Sydney College, 1964.

RICHARD HURD MONTAGUE

B. of Education, Keene Teachers College, 1963.

JANE ELIZABETH MORELAND

B.S. in Education, Madison College, 1960.

EMORY HALL MORGAN, JR.

B.S., East Carolina College, 1965.

ELIZABETH DAVIES MORIE

B.A., Mary Washington College of the University of Virginia,
1956.

JANE KELL NEWBILL

B.A. in Secondary Education, Longwood College, 1959.

REBECCA PROCTOR OWENS

B.S., St. Cloud State Teachers College (St. Cloud, Minnesota),
1944.

JOSEPH STANCIL PADGETT

B.S., East Carolina College, 1965.

TOMMIE Jo POWELL

B.S. in Elementary Education, Old Dominion College, 1968.

J. WOLF PROW

B.A., University of Maryland, 1963.

HENRY MICHAEL PUHN

B.S., College of William and Mary, 1968.

AMELIA JO REVERE

B.R.E., Southern Baptist Theological Seminary, 1953.

NANCY PAFFORD REYNOLDS

B.A., University of Arkansas, 1959.

BERNARD EDWARD ROBINS

B.A., College of William and Mary, 1968.

THOMAS LEE ROBINSON

B.S., Salem College, 1967.

FRANCES WEBSTER SACHON

B.S. in Social Science, College of William and Mary—Richmond Professional Institute, 1950.

JACQUELYN TARKINGTON SESSOMS

B.A., Wake Forest College, 1954.

JOHN SLIFKA III

B.A., College of William and Mary, 1964.

MARY CATHERINE SPOTTI

B.A., Quincy College, 1963.

LESLIE EARNEST SPRADLIN

B.S., East Tennessee State University, 1965.

CLAUDE DEAN TATE

B.A., Old Dominion College, 1965.

RICHARD J. WALSH

B.A., Niagara University, 1958.

MICHAEL GEORGE WEAVER

B.A., College of William and Mary, 1966.

PAUL LEHMAN WENGER, JR.

B.A., Eastern Mennonite College, 1960.

HAZEL BRADSHAW WHITE

B.S. in Education, Radford College, 1964.

ELLISON CARRIKER WHITMIRE

B.A., Furman University, 1960.

GAY MATTINGLY WOMACK

B.A., University of Pennsylvania, 1947.

BENJAMIN ELBERT WOMBLE, JR.

B.A., College of William and Mary, 1968.

CERTIFICATES OF ADVANCED STUDY IN EDUCATION

GEORGE WALTER CHANDLER

B.S.-Secondary Education, Old Dominion College, 1963.

M.Ed., College of William and Mary, 1964.

THOMAS MACK CHERRY

B.S., East Carolina College, 1957.

M.Ed., College of William and Mary, 1961.

ROUTH ANNE BOWLES KILBOURNE

B.S., East Tennessee State College, 1960.

M.Ed., College of William and Mary, 1966.

EDWARD C. LASSITER

B.A., University of North Carolina, 1949.

M.Ed., College of William and Mary, 1960.

JAMES COLIN MOUNIE

B.A., College of William and Mary, 1957.

M.Ed., College of William and Mary, 1959.

OLIVER ALLEN PAMPLIN

B. of Music, Richmond Professional Institute, 1957.

M.Ed., University of Virginia, 1964.

GEORGE A. STROUD, JR.

B.S., Kansas State Teachers College, 1952.

M.Ed., University of Virginia, 1961.

MASTERS OF SCIENCE

YIH-SHOUNG CHEN

B.S., Tamkang College of Arts and Sciences, 1963.

(Mathematics)

MARY SHARON VIETOR

B.A., Villa Madonna College, 1968.

(Mathematics)

MASTERS OF ARTS

RICHARD PAUL BARRETT

B.S. (Chemistry), Old Dominion College, 1967.
(Chemistry)

JOHN CHRISTIE DANN

B.A., Dickinson College, 1966.
(History)

RONALD PAUL DUFOUR

B.A., Merrimack College, 1969.
(History)

MARGARET FORTIER

B.A., St. Joseph's College for Women, 1963.
(History)

MARY SABRA GILLESPIE

B.A., Sweet Briar College, 1967.
(Biology)

GEORGE WASHINGTON GREER III

B.S., United States Naval Academy, 1962.
(Marine Science)

PHOEBE MARTIN HARCUM

B.A., College of William and Mary, 1951.
(Education)

LYNN ELLEN LOETTERLE

B.S., College of William and Mary, 1968.
(Biology)

JOHN BINGHAM MUNROE

B.A., College of William and Mary, 1964.
(Education)

MAYLING OEY

B.A., Saint Xavier College, 1968.
(Sociology)

EDWARD VICAR REYNOLDS III

B.A., Randolph-Macon College, 1968.
(Psychology)

DAVID RICHARD SCHRYER

B.A., Catawba College, 1954.
(Chemistry)

CAROLYNN ANN SOMMA

B.A., Longwood College, 1968.
(Biology)

HOWARD THORNTON TAYLOR, JR.

B.A., Grove City College, 1966.
(Education)

DOCTORS OF JURISPRUDENCE

JOHN LAWRENCE NORMAN, JR.

B.A., College of William and Mary, 1968.

SHARON HUFFMAN SIDERS

B.A., Roanoke College, 1966.

CONWAY WILBUR SMITH III

B.A., Randolph-Macon College, 1967.

DOCTORS OF PHILOSOPHY

SAMUEL HARVEY MELFI

B.S. in Electrical Engineering, The Citadel, 1959.
M.S., College of William and Mary, 1967.
(Physics)

WILLIAM WADE SAPP, JR.

B.A., Princeton University, 1960.
M.S., College of William and Mary, 1966.
(Physics)

ENROLLMENT

Session 1970-1971

	<i>Men</i>	<i>Women</i>	<i>Totals</i>
Freshmen	608	445	1053
Sophomores	429	402	831
Juniors	445	437	882
Seniors	455	372	827
Law School	287	21	308
Graduate	279	140	419
Auditors	13	16	29
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	2516	1833	4349

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

Session 1970-1971

Alabama	6
Arizona	2
Arkansas	2
California	24
Colorado	5
Connecticut	52
Delaware	26
Florida	26
Georgia	24
Hawaii	1
Idaho	1
Illinois	33
Indiana	21
Iowa	8
Kansas	1
Kentucky	14
Louisiana	6
Maine	3
Maryland	143
Massachusetts	35
Michigan	15
Minnesota	4
Mississippi	1
Missouri	6
Nebraska	4
New Hampshire	5
New Jersey	217
New Mexico	1
New York	147
North Carolina	32
North Dakota	1
Ohio	55
Oklahoma	2
Oregon	3
Pennsylvania	179
Rhode Island	11
South Carolina	17
South Dakota	3
Tennessee	14
Texas	19
Utah	1
Vermont	2
Virginia	3103
Washington	3

West Virginia	17
Wisconsin	2
Washington, D. C.	6
Puerto Rico	1
Belgium	4
Br. Honduras	1
Canada	3
France	1
Germany	1
Hong Kong	3
India	2
Iran	1
Italy	2
Japan	1
Malaysia	2
Morocco	1
Peru	1
Republic of Congo	1
Turkey	1
Taiwan	10
Venezuela	1
United Kingdom	8
Virgin Islands	1

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

Summer Session 1970

	<i>Men</i>	<i>Women</i>	<i>Totals</i>
Alabama	4	2	6
Arkansas	4	4	8
California	11	10	21
Colorado	4	2	6
Connecticut	12	13	25
Delaware	4	2	6
Florida	16	9	25
Georgia	6	8	14
Hawaii	1	0	1
Illinois	16	12	28
Indiana	5	4	9
Iowa	4	5	9
Kansas	2	3	5
Kentucky	3	5	8
Louisiana	1	3	4
Maine	2	3	5
Maryland	28	16	44
Massachusetts	10	5	15
Michigan	45	12	57
Minnesota	6	4	10
Mississippi	4	0	4
Missouri	5	3	8
Montana	0	1	1
New Hampshire	2	0	2
New Jersey	29	12	41
New York	22	30	52
North Carolina	19	10	29
North Dakota	1	3	4
Ohio	14	10	24
Oklahoma	1	1	2
Pennsylvania	33	16	49
Rhode Island	4	1	5
South Carolina	4	4	8
South Dakota	1	0	1
Tennessee	3	2	5
Texas	8	4	12
Utah	1	0	1
Vermont	2	0	2
Virginia	716	721	1437
Washington	3	0	3
West Virginia	8	2	10

	<i>Men</i>	<i>Women</i>	<i>Totals</i>
Wisconsin	1	5	6
Washington, D. C.	4	0	4
Puerto Rico	2	0	2
Taiwan	2	1	3
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MEMO

MEMO

MEMO



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2. THE BRAFFERTON
3. THE PRESIDENT'S HOUSE
4. EVELL HALL (ADMISSIONS)
5. WASHINGTON HALL
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38. HUGH JONES HALL
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43. JAMES BLAIR TERRACE†
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† Off-campus

